Corporate eLearning Acceptance: the role of Context and Communication

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We shall not cease from exploration and the end of all our exploring will be to arrive where we started and know the place for the first time.

T.S. Eliot, Four Quartets.

Executive Summary

The fast integration of Information and Communication Technologies (ICTs) is showing its deep impact onto society in every aspect. Each new technology – and also eLearning – needs to be accepted and integrated in everyday practices. The problem of eLearning acceptance is confirmed by data about abandonment and dropouts of eLearning activities and its relevance emerges clearly in a context where knowledge is the key factor and where ICTs are in charge of sharing information and content (*knowledge society*).

The hypothesis of this research is that context factors surrounding eLearning experiences affect participation and motivation; they can be managed in order to enhance the level of acceptance. In particular the communication of eLearning activities, among contextual elements, emerges to have an impact onto the acceptance of eLearners.

The research aims at describing the conditions of eLearning acceptance, understanding the role of context and communication factors and providing a set of parameters to be considered when an eLearning activity is planned and proposed to eLearners.

A blend of qualitative and quantitative methods has been chosen to achieve the goals of the research and build an eLearning Acceptance Index. Key factors have been identified through a comprehensive analysis of the literature on the acceptance issue. Theories and models are presented focusing on phases and variables of the acceptance process and highlighting the importance of contextual factors. A general framework of analysis for the implementation of eLearning activities in organisations is built and presented in the Map of eLearning Acceptance (MeLA). The second part of the research operates a focus on MeLA considering only organizational context variables that affect mainly the preparation phase of the eLearning Acceptance process. The list of variables obtained with this operation has been refined, described, assessed, divided and organized through nine case studies and two surveys.

This research has made a step forward in the comprehension and solution of the problem of eLearning acceptance. In particular, the Map of eLearning Acceptance and the eLearning Acceptance Index represent two original instruments that eLearning researchers and practitioners can use.

Companies seem to be familiar with tools and strategies to enhance eLearning Acceptance but they lack of a farseeing approach. They are rather focused on solving short term issues than building an eLearning culture and a comprehensive environment. Communication channels are well exploited to deliver information but seem to lack when it comes to involve and motivate eLearners.

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1. Introduction and Research design

The research problem and motivation are presented in the first part of the chapter (§ 1.1.). Preliminary reflections about eLearning and its context are needed: the role played by ICTs in the so called knowledge society and their strategic function in the educational arena are investigated; eLearning definitions and a brief description of the research community are also provided.

The relevance of eLearning acceptance is described in the second section (§ 1.2.) and it is confirmed by data about eLearning dropouts and starting ratios. A research of the ASTD and the Masie Center suggests that contextual factors and communication can strongly affect eLearning acceptance. In order to study this issue a research project has been designed (§ 1.3.), main goals, field of application, research questions, phases and the blend of methods used will be summarized in the third paragraph.

1.1. Research context and definitions: the eLearning field

The history of technologies shows the continuity of eLearning in the process of integration of ICTs within the education and training sector. Especially in the knowledge society, ICTs and education are important means to equip new generations to face economical, cultural and political changes. A better understanding of eLearning allows drawing main issues and research trends in the field. A scattered research community has just begun to investigate the relationships among innovation, technology and learning.

1.1.1. ICTs and knowledge society

The "technologies of the word" (Ong 2002) play an important role in every culture/society and their evolution is strongly affected by it.

Every time a new technology enters the communication market, acquired habits and consolidated hierarchy of sources are challenged by it (Cantoni & Di Blas 2006; Gackenbach & Ellerman 1998). The adoption of a new communication technology, for example, by an organization, affects the whole organization, since the new element necessarily gives rise to a reorganization of the whole system. If – for instance – email is introduced in an organization, the new element is necessarily used for some tasks that were before carried out by means of fax, phone, mail or express carrier; each one of the "old" technologies will thus have to re-negotiate its field of action (its territory) with email (Cantoni & Tardini 2006; Fidler 1997).

The fast integration of ICTs is showing its deep impact onto society (knowledge society) in every aspect (Negroponte 1995; Eppler 2003).

Computer literacy (Bolter 2001) and familiarity with the net have a major impact on people's employability in many sectors and areas; and access to the internet means an

increased access to information, education and economic opportunities as well as more opportunities for communication and political participation. Not getting access to it could entail fewer chances in the same areas; in fact, as long as countries enter the so-called information society – defined by European Union as being "a society in which low-cost information and ICTs are in general use" – or knowledge society – where "knowledge" stresses "the fact that the most valuable asset is investment in intangible, human and social capital and that the key factors are knowledge and creativity" (europa.eu.int/comm/employment_social/knowledge_society/index_en.htm) – access to information and the use of it become the most important competitive factors at a national and regional level, as well as at a corporate and individual level (COM 2002). Jeremy Rifkin calls it the "just in time" workforce, where workers are hired on a contingency basis where there is a demand for the products. Though, ICTs play a crucial role in a market when skills and competences – "know how" – need to be constantly and faster updated (Rifkin 2001).

The knowledge society and all its dynamics – the education among the first ones – has top priority also in governments' agendas.

Improving telecommunication infrastructure is both an effect of economic development and a major motor of it. For this reason all the economically developed countries and many developing ones foster the diffusion of ICTs and computer literacy among their citizens, through political and economic incentives. The Lisbon European Council stated that "the shift to a digital, knowledge-based economy, prompted by new goods and services, will be a powerful engine for growth, competitiveness and jobs. In addition, it will be capable of improving citizens' quality of life and the environment" (European Parliament 2000); while in the Geneva Declaration it is affirmed that "to achieve a sustainable development of the Information Society, national capability in ICTs research and development should be enhanced" (ITU 2003).

In Switzerland the Information Society Coordination Group (ISCG) has been mandated to "lead the federal administration's ICTs activities and to make the Swiss population aware of the challenges of the information era" (OFCOM 2005).

1.1.2. ICTs in education

Education and training are at the core itself of every social/cultural/economic transformation, equipping new generations to face new challenges and opportunities, as those offered by ICTs.

In recent years, a rapid development of eLearning activities has been observed in European universities, as well as the launch of national support programs in most countries (Bates 2001; van der Wende and van der Ven 2003). There are a large number of studies on the evolution of the higher education system in Europe and worldwide (Cantoni & Succi 2002; De Boer *et al.* 2002; Lepori, Cantoni & Succi 2003; Lepori & Succi 2004; Succi & Cantoni 2005) and most of them are intended to identify the role of eLearning, its development possibilities and main trends (Coimbra Group 2002; Collis & van der Wende 2002).

Moving to the private sector (Sugrue & Rivera 2006), the eLearning Industry Group (eLIG) developed some recommendations to foster the production and widespread deployment of quality learning resources in digital format as part of European Commission actions to stimulate growth and to create more and better jobs in Europe.

> *"eLearning is not an objective in itself, but rather a way to make education and learning more effective, efficient and pervasive. It has the power to transform education but it should also be the engine in all major initiatives where new skills and behaviours are required. It stretches far beyond course based learning and leverages new technologies such as collaborative and community software, Instant Messaging and Blogs and*

> *social Network Analysis to give a few examples. It encompasses concepts like Content Management, Knowledge Management, Performance Support, Workflow Learning and Virtual Cooperation. Thus eLearning can be a powerful engine for the knowledge-based society affecting us in many aspects of our lives".*
>
> (eLIG 2005)

It is not, of course, the first time that technologies are integrated in the educational arena: on the contrary, it is historically considered one of the major test-bed for new "technologies of the word": there people look for a confirmation of the social relevance of their innovations (Surry & Farquhar 1997; Goldratt 2000), as well as for economic investments endorsed by the social community.
Moreover, education and training try and implement every ICT as soon as it becomes available, due to the close interaction between education and communication (Cantoni, Botturi & Succi 2007), as it will be mentioned also in the following sections.

1.1.3. eLearning

In general, when digital information and communication tools are integrated into the learning/teaching experience, we enter in the eLearning field (Adelsberger *et al.* 2002; Rossett 2002). Many terms and definitions have been used to indicate the integration of digital media in teaching/learning processes. Adopting the three levels proposed by OECD's definition of eGovernment (2003), it is possible to describe eLearning, as being:

- internet (online) education and training;
- the use of ICTs in education and training;

- the capacity to transform education and training through the use of ICTs (Cantoni & Tardini 2006).

The definition of eLearning offered in EU documents, and adopted by this research, integrates all the above-mentioned layers: "the use of new multimedia technologies and the Internet to improve the quality of learning by facilitating access to resources and services as well as remote exchanges and collaboration" (CEC 2001: 2); while in the ASTD Learning Circuits, it is defined as: "term covering a wide set of applications and processes, such as Web-based learning, computer-based learning, virtual classrooms, and digital collaboration. It includes the delivery of content via Internet, intranet/extranet (LAN/WAN), audio- and videotape, satellite broadcast, interactive TV, CD-ROM, and more" (www.learningcircuits.org/glossary).

1.1.4. The research community

As the definition of eLearning presents some ambiguities, in the same way the community in charge of studying it is complex and difficult to circumscribe (Cantoni & Rega 2004).

ELearning is not in itself a discipline, but is studied by many disciplines, trying to answer two main questions:

- *what are the dynamics concerned with teaching and learning in the knowledge (ICTs) society?* (theoretical framework)
- *how can ICTs be integrated in the teaching and learning experience in order to increase its effectiveness and efficiency?* (applied science approach).

There are researchers from psychology, technology, sociology, communication sciences as well as from economy and so on, and multidisciplinary approaches are also very common.

Nonetheless, a specific community has been growing up, devoted both to study and to promote eLearning experiences, independently from different points of view and stresses; a common (inter)disciplinary ground is being collaboratively defined and established. ELearning studies are thus moving to become a (inter)discipline, with a specific study subject/object, and common theoretical and practical purposes.

The community of research and practice grown (and growing) around eLearning negotiates and builds up a common body of shared knowledge, a process necessary to its strengthening, and to make its research activities both effective and efficient. The growing of a specific (inter)discipline is showed also by the presence of research organizations, conferences, journals, book series and academic institutes: all of them bear testimony of a common interest and a common field of research and experimentation (Cantoni & Rega 2004; Kim & Lee 2006).

The research agenda of the eLearning field is strongly affected by the diverse community working on it. It is hard to identify common approaches and methodologies as well as comprehensive models and theories (Bates 1999).

The *eLearning Review* service, provided by the SCIL centre of St. Gallen, offers an overview of the nine main issues on which eLearning research is focused (www.elearning-reviews.org).

Strategy	**Quality**
Institutional Strategies, Business Models, Cooperation, Implementation, Policy, Environment	General, in eLearning, Higher Education, Quality Management, Accreditation and Certification
Pedagogy	**Technology**
Educational Principles, Readiness, Communication, Assessment, Learning Design, Learning Ware	Interactive Environments, Communication and Collaboration, Cognitive Tools, Learning Management Systems, Learning Objects, Mobile Learning, Strategic Issues
Human Computer Interaction	**Organisation**
Usability, Design Principles, Information Design	Support Structures in HE, Corporate Educational Organisation

Resource Management	**Competence Development**
Project Management, Educational Controlling	General Research, Measurement, Higher Education, Vocation and Training
Culture	
Change Management, Learning Culture, **User Acceptance**	

Table 1: A Research Agenda proposed by eLearning Reviews (www.elearning-reviews.org).

The eLearning research agenda differs significantly depending on the educational context that is considered. The portal *elearningeuropa.info*, offered by the European Commission, distinguishes among a) schools, b) higher education, c) training & work and d) learning & society. In each of these sectors/areas research trends and relevant issues can be identified.

Considering the classification presented in table 1, it is possible to place this research under the tag "user acceptance", within the "culture" area. Moreover, a focus will be operated on the corporate sector, as it will be explained in the following section (Bürg & Mandl 2005; Keller & Cernerud 2002; Martins & Kellermanns 2004).

1.1.5. A dynamic Map

In a simpler way, the eLearning field can be graphically represented as the point where technology, innovation and learning overlap. The scheme below (Figure 1) helps in understanding the eLearning research area and in summarising the peculiarities of its context, as described above.

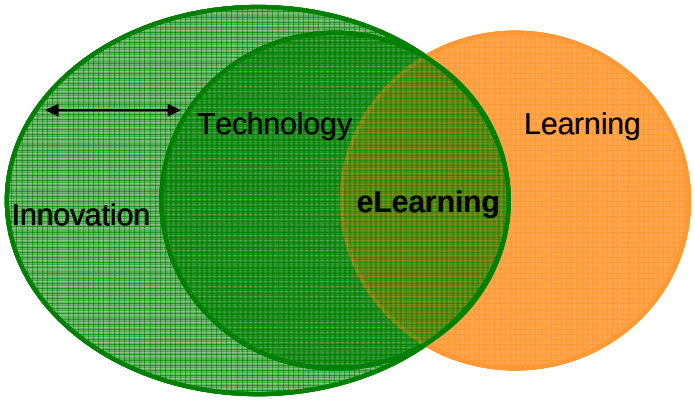


Figure 1: A dynamic map of the eLearning field.

a) Innovation – Learning: in the knowledge society learning processes are changing together with economical, political and social processes. ELearning includes and enhances original pedagogical approaches, training experiences and educational paths (Maragliano 2004).

b) Technology – Learning: it is possible to talk about eLearning each time ICTs supports, affects, integrates or substitutes a face-to-face learning activity (Bates 2001).

c) Innovation – Technology: it has to be noticed that the circle of technology would be dynamic, depending on the level of "innovativeness" of a technology (Figure 1). A technology represents always an innovation when enters a society (§ 1.1.1.), bringing social, technical and economical uncertainties (Winston 1998). If the technology circle perfectly overlaps the innovation one in figure 1, it means that a technology has been fully accepted; it happens when it is integrated in the daily practices and values of a social system without being perceived as "something new" (Fidler 1997).

1.2. Research Issue: eLearning Acceptance

Each technology – and also eLearning – needs to be accepted and integrated in the society. The relevance of the problem of eLearning acceptance is confirmed by data about abandonment and dropouts of eLearning activities. This stimulated a study on eLearning Acceptance conducted by the ASTD and the Masie Center that emphasised the role of the context surrounding eLearning activities and aroused several hints for following research. In particular, the communication element emerged to be extremely important and main contributions to the issue are highlighted in the last paragraph.

1.2.1. The acceptance issue

In a context where knowledge is the key factor (COM 2002), where education conveys and updates it and where ICTs are in charge of sharing information (Rifkin 2001), the acceptance of eLearning activities is of crucial importance for the society (Lindstaedt & Farmer 2005).

For each technology it is possible to distinguish two different populations dealing with it: natives and immigrants (Prensky 2001). The distinction refers to people who born with a technology and people who have to accept and integrate it in a second moment of their life. Most of the people now dealing with eLearning can be defined digital immigrants and this is even more evident when senior managers, instructors and adult learners are considered.

For those categories digital contents and technological tools are constantly introduced in their teaching/learning processes provoking huge changes. The acceptance of new technologies is always a complex process that entails many aspects (social, psychological, economical, etc.) and their adoption or rejection occurs over time, under different conditions (cfr. §2.2).

Thus, acceptance is not an obvious step for eLearning and it is extremely relevant to be studied in the context of the knowledge society. In fact, in the framework described in §1.1, where computer literacy and the access to the net have a strong impact on people's employability, a deep reflection on the acceptance of new technologies for education is needed.

The attention of researchers is rather focused on the design, development and delivery of instructional products while there is a lack of awareness about implications brought by the introduction of new technologies in learning processes and about the required cultural change (Rosenberg 2006; Sloman 2002; Succi 2004).

1.2.2. The acceptance in education: dropout

The relevance of a research on eLearning acceptance is demonstrated by the high percentage of losses observed (Frankola 2001; Jun 2005). According to statistics, often employees don't start eLearning activities (even if compulsory) and high dropout rates are registered. Martinez (2003) defines dropout as the "Achilles heel" of eLearning while Frankola (2001a) defines high dropout rates as eLearning's embarrassing secret and "taboo".

Dropouts have economic and educational implications. A need for research to determine predictors of attrition in online education is of particular importance because governmental funding to institutions is often based on attendance (Parker 1995). Also in the private sector, training budgets and investments are often allocated in accordance with course completion. Secondly, high dropout rates have a negative impact on online education, reducing its effectiveness when compared to face-to-face education.

Organisations' dropout rates range from 20 to 50 percent for online learners. In general, administrators of eLearning courses agree that dropouts rates are at least 10 to 20 percentage points higher than in their face-to-face counterparts (Frankola 2001). Again

Lynch (2001) reports an experience with eLearning courses where learners' dropout rates were as high as 35% to 50%, compared to 14% for the same curricula in face-to-face classrooms. Following studies confirmed the difference rate of completion (Jun 2005; Wang *et al.* 2003; Willging & Johnson 2004) between online and face-to-face activities. Besides, many authors ask themselves if it is reasonable to make this comparison (Phipps & Merisotis 1999; Russell 1999), considering the different publics attending those learning activities, different goals (Diaz 2002) and different strategies and barriers to the enrolment (Terry 2001).

To address this problem the Masie Center and ASTD launched the "Learning Technology Acceptance Study" (2001).

1.2.3. A study on eLearning acceptance

In 1999 the Masie Center and ASTD launched the "Learning Technology Acceptance Study". Its mission was to better understand the key barriers and enablers to learning technology acceptance and use. The study surveyed nearly 30 courses at 16 companies and over 700 eLearning end users.

At that point, while the use of and the market for eLearning was well known, there was a relative lack of sound, rigorous research specifically focused on learners' acceptance and satisfaction with eLearning. They observed that learners often resist participating in eLearning courses, even if training was proposed as so-called mandatory.

They decided to concentrate only on start rates in eLearning courses because completion rates (non drop-out rates) are notoriously low and give little information about learners' acceptance motivation.

The focus of ASTD and The Masie Center study was to understand the importance of the context surrounding eLearning experiences unless consider the sole technology.

In brief, the findings of the study revealed that organizations could influence learner acceptance as well as satisfaction by addressing aspects of the eLearning context (Carter 2002; Brown 2001). Moreover acceptance of and satisfaction with eLearning had relatively little to do with characteristics of the learners to whom courses were offered (ASTD and The Masie Center 2001).

The average start rate for studied courses was about 58%; where the participation was voluntary it was a mere 32%, while where mandatory it was 69%. Full participation tended to occur where courses:

- were tied to performance reviews;
- were not taken at desk;
- had intense marketing and promotion;
- had an internal champion.

For what concerns in particular the latter point they also observed that start rates increase where companies:

- use formal means of communication;
- use testimonials;
- have an internal champion;
- purposefully use managers/supervisors to promote the course;
- inform people about training more than once.

For what concerns the support aspects, start rates increase:

- explaining why the learner should take the course;
- motivating the learner by linking the course content to the workplace and business objectives, as well as future career opportunities;
- displaying an interest in the upcoming course and giving as much status and importance to it as attendance at a physical class;
- providing time or coverage to take eLearning courses during or at work.

Results were published in a report titled “E-Learning: ‘If We Build It, Will They Come?’” (ASTD and The Masie Center 2001) that stimulated many research based on their findings (Bazzoni & Milburn 2003; van Buren & Sloman 2003; Geisman 2001; Rossett & Schafer 2003; Saber *et al*. 2005).

1.2.4. The role of communication in eLearning acceptance

The study of ASTD and the Masie Center (2001) raises many issues that have been considered also by the subsequent works. One seems to be of particular interest even if not extensively addressed by research: the communication issue.

Generally, the communication of eLearning has been investigated referring to online collaboration and CMC studies based on a pedagogy-oriented literature (Adelsberger *et al.* 2002; Dillenbourg *et al.* 1996) where communication is considered as the main tool to promote knowledge sharing (*constructivism or social constructivism*); through collaboration eLearners can improve their learning experience and build a community of practice (Calvani & Rotta 2000; Jonassen 1991; Vygotsky 1985; Wenger 1998).

An other common approach to the issue considers communication as a strategy to manage the transformation brought by the introduction of a technology in an organization (Boni 2006; Ducci 2006; Ebadi & Utterback 1984, Nonaka 1991).

Differently, in the study presented above, it emerged rather a social-oriented approach that aims at describing communication as an instrument to vehicle an “eLearning culture”. It suggests that communication plans and communication channels can be important levers for eLearning acceptance.

Very few studies investigate explicitly the topic of communication in eLearning from this perspective even if it is mentioned and presupposed by several authors. For example, Geisman (2001) suggests peer-to-peer communication as one of the method to

manage learners' obstacles to eLearning acceptance, while Schafer and Rossett (2003) invite managers to encourage eLearners and to communicate goals and whys of eLearning activities. Bazzoni and Milburn (2003) underline the necessity of create a "Corporate Communication Program" in order to build a community favourable to eLearning.

Martha Gold in "8 lessons about eLearning from 5 organizations" (Gold 2003) provides extensive evidence of it. Hereafter, for instance, the case of Kodak:

> *Throughout Kodak's Latin America facilities hang brightly colored posters with catchy slogans in Spanish and Portuguese that urge employees to get online and visit the company's new eCampus portal. Monthly newsletters highlight learner success stories, answer questions, and publicize eLearning resources and emails featuring outstanding Website.*
>
> (Gold 2003: 55)

After three years, Gold reports, allocating resources to implement an enterprise-wide eLearning project, a branch office of Kodak in Latin America conducted a huge advertising campaign. Three months later the launch of the initiative, 60% of employees was enrolled in eLearning courses.

In the case study of PNC Bank, the responsible of eLearning declared the importance of communication of eLearning considering the dissatisfaction of employees with the eLearning initiative.

> *When it comes to getting employees to the computer for training, a well-researched and well-planned communication marketing strategy and course listing are more powerful lures.*
>
> (Gold 2003: 49)

Moreover, Elliott Masie (2004) underlines the importance of communication in the "invitation process".

> *Too many organizations have "automated" the invitation process, only to find a lower than expected participation and motivation rate amongst consumers of e-Learning.*
>
> *Let's look at the differences between how an associate of an organization may be invited to participate in a classroom based vs. e-Learning based management development program:*
>
> - *Classroom Invitation: The manager of the associate calls her into their office and tells her, with some degree of excitement, that they have been selected to participate in a Management Development Retreat. […]*
> - *e-Learning Invitation: The manager of the associate sends an email saying that they have been selected to attend an on-line e-Learning program and sends them the URL and a password. This may be the only interaction.*
>
> (Masie 2004)

In an eLearning environment, where people can act in different spaces (asyntophy) and at different times (asynchronicity), the lack of a common *grounding* could obstacle the negotiation of goals, methods, and expectations and increase the risk of dissatisfaction and abandonment. Communication plays an important role in reducing "distances" among participants.

Considering the theory of speech acts (Austin 1962; Searle 1978), communication is defined as a group of actions that sender and receiver put in action in order to achieve their goals. An interaction occurs when the goals of two or more agents are

complementary (Rigotti & Cigada 2004). A communication, though, succeeds when somehow it promotes a change in the receiver, inducing a *habit change* (Peirce 1982).
This is a common situation in a learning interaction where there are usually a teacher that desires to teach and one or more learners that desire to learn; in a learning activity the desirable change is usually made explicit through the declaration of learning goals.
Clark (1996) states that the whole process is facilitated through the presence of a *common ground*, which allows agents to build new knowledge rooting it in a common "territory".
When something new is introduced, as a new concept in a course, communication is very important to anchor it to a "common ground" in order to reduce the risk of incomprehension and misunderstanding.

This research will discuss the communication issue among context factors that cooperate at the creation of a favourable environment for eLearning acceptance. Communication channels, formal, informal and interpersonal communication will be studied in the larger framework of the literature about eLearning acceptance (§ 2.2.).

1.3. Research structure: a blended method

In this section the research design is presented. A blend of qualitative and quantitative methods has been chosen to achieve the goals of the research. Questions about eLearning acceptance have been addressed to the corporate sector and five phases illustrate all the steps and methods involved in the research.

1.3.1. Research in eLearning

During its rapid growth, due to the naturally interdisciplinary community at work in this field, research in eLearning and educational technologies has hosted a number of different methodologies, leading to partly conflicting and partly complementary approaches and results (Jonassen 2002).

Early research – and indeed, a large part – in the field of media in education, has focused on the quantitative comparison of media-supported or media-based instructional strategies and experiences with their face-to-face or non-mediated counterpart (Russell 1999), following a design-based experimental approach. Such experiments were mainly conceived as proof for validation or rebuttal of pedagogical hypotheses. More recently, scholars have acknowledged the huge differences that characterize all educational settings and influence the design, acceptance, and effectiveness of technologies (Sorensen *et al*. 2005). They have made advocacy for a more qualitative or empirical approach, focused on identifying the salient features of each "story" in the application of IT to education (Campbell *et al.* 2005).

The research project aims at merging complementary approaches and to propose a methodologically original research path. A blend of qualitative and quantitative methods has been chosen to describe the complexity of the research problem and to answer the research questions.

1.3.2. The goals

The research aims at better understanding the conditions of eLearning acceptance. Key factors can be identified through an original and comprehensive analysis of the literature on the acceptance issue.

The role of the context and communication in eLearning acceptance has not been extensively investigated in academic studies; the research wants to provide a description of it and to outline the elements that need to be considered when an eLearning activity is communicated to eLearners.

In order to fill the gap among theoretical studies and practical experiences, empirical data will be gathered through case studies and questionnaires. The main desirable output of the research is a set of guidelines to be addressed and used by researchers, learning managers and practitioners.

1.3.3. The field

Most of academic studies on eLearning have been carried out within the higher education field while few efforts have been done with other organizations such as companies or public institutions (Bates & Poole 2003; Bersin & Associates 2004). Based on the opportunity to collaborate with some international companies, it was decided to investigate eLearning acceptance in the corporate setting.

It is significant that: a) it constitutes an original approach in the research on individual acceptance, b) it allows to know a reality rich of experiences but often overlooked, and c) several biases concerned with the “captive” public of university and college students can be overcome.

On the other hand it has to be noticed the difficulty a) in getting critical data, b) in managing reserved data, c) in finding people available to collaborate without being paid and d) without the guarantee of an immediate added value to their organization.

To surmount those barriers special agreements were made with each company. It has been promised that data would have been dealt with the highest confidentiality and that only aggregated results would have been published.

1.3.4. The hypothesis and research questions

The hypothesis of the research is that context factors surrounding eLearning experiences affect eLearning acceptance; they can be managed in order to enhance the level of acceptance. In particular the communication of eLearning activities, among contextual elements, emerges to have an impact onto the acceptance of eLearners.

There is an insufficient amount of evidence for any critical analysis or attempt to test causal hypotheses. A more extensive knowledge of the issue is needed before designing a study that intends to verify the strength and the nature of these relationships.

This descriptive study will be driven by the following questions:

- Q1: How is the eLearning acceptance process structured?
    - Q1a: Which are the main phases of the eLearning acceptance process?
    - Q1b: Which are the main variables affecting it?
- Q2: Which is the role of the context in eLearning acceptance?
    - Q2a: Which are the main context variables affecting it?
    - Q2b: What does an organization have to do in order to equip eLearners to accept an eLearning experience?
- Q3: Which is the role of communication in eLearning acceptance?
    - Q3a: Which are the main communication variables affecting it?
    - Q3b: What does an organization have to communicate in order to equip eLearners to accept an eLearning experience?

1.3.5. Phases and methods

The research design can be divided in five phases and several methods can be identified; they are represented in figure 2 and a further description is provided below.

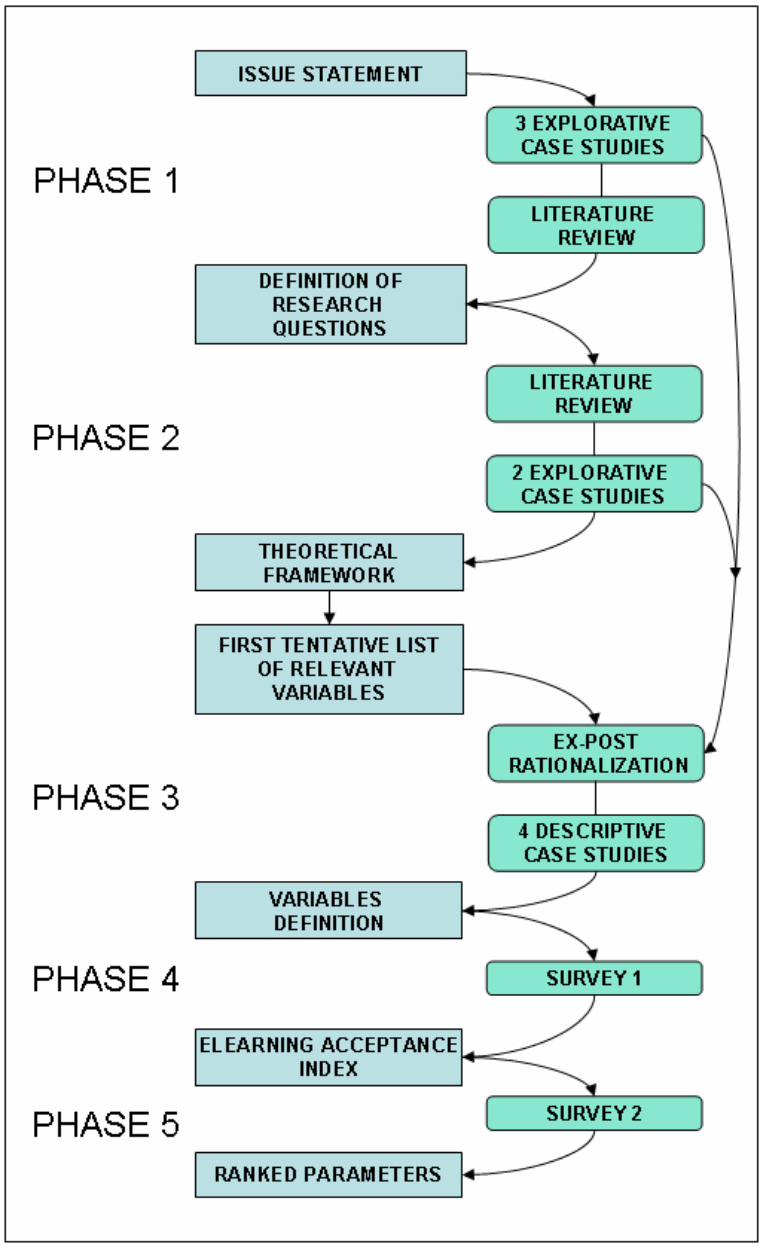


Figure 2: Main phases and methods involved in the research.

Phase 1 – what is worth of being studied?

The research began with the opportunity to collaborate with three companies offering eLearning activities. Critical issues concerning eLearning experiences were observed and it was decided to identify main strengths and weaknesses of eLearning in those organizations through explorative case studies. This purpose led site visits and interviews to eLearning managers and employees. The methodology of explorative case studies conducted at Banca Intesa, Alenia and Esprinet in Italy is further detailed in Chapter 4. Many data and documents were gathered and they helped in better defining the scope of interest of the study (i.e. private sector, managers) and research questions. Relevant elements came out from the three case studies also in the third phase (Figure 2) through an ex-post rationalisation analysis.

Problems and successful factors identified in the case studies found support in the literature where similar experiences and research are presented. This preliminary review of the literature allowed formulating the research questions.

Phase 2 – is it relevant what we are studying?

Once the research questions were defined, they were addressed to the research community. An extensive review of the literature contributed to a better understanding of the research issue and to the creation of a theoretical framework.

It has to be noticed that other explorative case studies have been carried in this phase. They took place in two companies: Kraft in U.K. and Alcoa in Australia; the goals of these case studies were to assess the relevance of the research issue among eLearning managers and to enlarge the review of literature. Also in this case, data were later analysed through an ex-post rationalization.

Phase 3 – which are the most important factors?

The theoretical framework was refined through the synthesis of the literature and it can be considered a comprehensive map of all the relevant studies on the research issue.

In this phase starts the long process that led to the creation of a final index. Based on the works considered by the literature review, a list of variables affecting eLearning acceptance was drafted. Due to the width of the research issue and focusing on the research questions, a choice of variables was operated.

The 40 variables selected were described and assessed about their relevance through an ex-post rationalization (operationalization). The following four descriptive case studies occured in two Italian companies: Fiat and Ernst & Young Italia; and in two American companies: Homedepot and jetBlue. The integration of these case studies caused that some variables were added to the original list. Moreover, four critical areas were identified and taxonomy of the variables has been drawn.

Phase 4 – are they present in companies? is there any other important factor?

It was decided to consult experts of the field about the presence of the variables. In order to build a deliverable questionnaire it was necessary to reduce the number of elements. A survey was delivered to learning managers in companies of an American consortium. They were asked to declare their opinion about the parameters presented and suggest further steps not included in the list.

Phase 5 – should they be listed? in which order they can be listed?

Based on the results of the first survey the final eLearning Acceptance Index was submitted to an other sample of companies. The survey was divided in three parts in order to asses the presence of the parameters, the importance and the role of communication.

1.4. Following chapters

The remaining part of the dissertation is organized as follows.

Chapter 2 presents a review of the literature focused on three research fields: innovation acceptance, technology acceptance and learning acceptance.

Chapter 3 presents the Map of eLearning Acceptance (MeLA) illustrating the key conceptual constructs, main phases of the eLearning acceptance process and the categories of factors affecting it. A focus on a part of MeLA isolates a set of variables to be further investigated.

The goal of Chapter 4 is to build an index of eLearning acceptance. Critical factors are assessed through nine case studies and two surveys.

In Chapter 5 results will be discussed while conclusions and some outlooks for future research will be drawn.

Reports of case studies that have been authorized by companies are collected in the Appendix.

2. The Literature Review

In this chapter the methodology (§ 2.1.) and the presentation (§ 2.2.) of the literature review will be discussed. The presentation is divided in three parts according with the main research areas studying the eLearning acceptance issue. Each part presents an overview of main theories and models of the research area and summarizes contributes of relevant authors; this is focused on phases and variables of the acceptance process and highlights the importance of contextual factors.

Besides, a brief focus on the communication issue will be done together with a synthesis of core topics.

2.1. Review Methods

The large amount of material available on the issue has been processed following different strategies. A preliminary remark related to the field of application of the research is needed. In the corporate sector can be retrieved a lot of informal information; there are many experiences that are reported by practitioners through unofficial blogs, wikis, newsletters or corporate magazines. Even if their reading has been really inspiring in the first phase of the research, they will not be included in the literature review.

The review of published works, considering journal articles, books, academic papers and reports of case studies, was carried out following these search methods:

- Electronic search of 8 databases and Google Scholar by index terms, title, and abstract:
    - "AACE Digital Library"
    - "ProQuest 5000 International"
    - "ProQuest Education Journals"
    - "Academic Research Library (ProQuest)"
    - "Career and Technical Education (ProQuest) "
    - "CBCA Education (ProQuest)"
    - "ERIC (EBSCO)"
    - "WilsonWeb"
- Hand search of journals and books in libraries and bookshops;
- "Snowballing" strategy based on bibliographies, random inputs and discussions;

The electronic searches were carried out combining the terms of column 1 and 2:

Column 1	Column 2
eLearning	acceptance
online learning	dropout
instructional design	retention
	resistence
	diffusion
	innovation
	communication

Table 2: Terms used in the literature review searches.

Several publications were not taken into consideration because redundant or not pertinent with the topic. For example, combining “column 1” terms with “communication”, a number of articles about different topics as collaborative learning (§ 1.2.4.) or the analysis of communication tools (chat, forum …) were found.

2.2. Literature Review Presentation

The issue investigated can be referred to as the eLearning acceptance problem (Masie Center and ASTD 2001; Masie 2002).

So far, three main approaches to eLearning acceptance are present in the literature.

- Innovation acceptance theories applied to every type of innovation, and also to eLearning (§2.2.1.).
- Technology acceptance research carried out originally to predict technology user acceptance and extended to eLearning (§2.2.2.).
- Learning acceptance studies developed to understand learners' choices in higher and distance education as well as in eLearning (§2.2.3.).

In figure 3 these approaches are graphically represented.

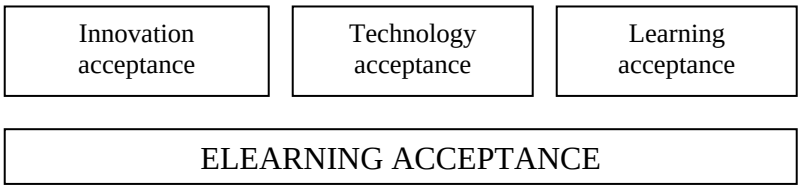


Figure 3: Literature review overview.

Two preliminary remarks are required since acceptance research has yielded to numerous competing models (Venkatesh *et al.* 2003).

First, within this broad area of inquiry, there have been several streams of research, which focus on either implementation success at an institutional or organisational level (Venkatesh *et al.* 2003) or, as in this research, on individual acceptance.

Second, very different models will be discussed together. An awareness of their differences and peculiarities will be maintained. Nevertheless, it is possible to group some of them on the basis of commonalities such as acceptance process phases, and

variables affecting them. Even if so far partially neglected, an interdisciplinary approach could lead toward an extensive framework of eLearning acceptance.

It follows a section focused on each of three research areas considered in the literature review. Each area will be structured as follows:

1. *Introduction* - the topic is introduced and other possible approaches are discussed;
2. *From the Literature* - a general overview of the literature that highlights relevant aspects to the research's questions;
3. *When it comes to eLearning* - an in-depth focus on research applied to eLearning and on the main determinants of its acceptance;
4. *Communication issue* – it explores how authors have studied or simply mentioned the communication issue within their area of research;
5. *Synthesis* - the section underlines the core issues and anticipates the relevance of the research area for the theoretical framework.

2.2.1. Innovation Acceptance

2.2.1.1. Introduction

When an innovation enters a social system the way through which it comes to be accepted or adopted within a community usually does not follow a linear and continuous path (Cantoni & Succi 2002). Although main contribution to the discussion comes from Innovation Diffusion Theories (IDT) that will be illustrated in details (§ 2.2.1.2.), two other models can help us in explaining the diffusion of innovations: the model of linguistic change and that of ecological systems.

The model of linguistic change (Coseriu 1981) explains the phenomenon of innovations in human languages, which is how a new element (a new word, a new syntactical construction, and so on) enters the language system and gets to be used by a given community. The introduction of a new element into the language follows three steps: a) innovation - the new element is invented/used by someone; b) adoption - the new element is then accepted and used by the hearer; c) change - finally, the new element spreads in the system; for instance, a word becomes part of the lexicon of a language, is inserted in dictionaries, and so on (Cantoni & Tardini 2006).

Besides, the impact of an innovation on the context in which it is inserted (a society, a community, an organization) can be well described through the comparison with an ecological system that has two basic features: a) they are high-interdependence systems - this means that a little change made in a part of a system, such as, for instance, the arrival of a new animal species in a part of the system has consequences on the whole system; b) ecological systems are also characterized by the non-reversibility of their processes - once a process takes place, it is impossible to come back to the status of the system before the process (Cantoni & Di Blas 2006; Cantoni & Tardini 2006).

Those models can be useful in understanding the social and systemic change brought by an innovation even if they are less helpful coming to its acceptance by single individuals that has been deeply investigated from IDT.

The general research questions that can be addressed to IDT are: how do individuals accept or reject innovations? Which factors do affect acceptance? Which is the role of communication?

2.2.1.2. From the Literature

Since the second half of the last century diffusion theories (IDT) have analysed the diffusion of innovations in given social contexts. Beside the focus on individuals'

acceptance, they are considered here also because they include several context factors, because of their attention to the communication issue, and because of their wide application to technological innovations, as well to eLearning (Dooley 1999).

→ General scope

The theories' purpose is to provide individuals from any discipline (rural sociology, education, public health, communication, marketing and management, geography, economics …) interested in the diffusion of an innovation with a conceptual paradigm for understanding the process of diffusion and social change.

→ Not a Unified Theory

The most important fact to be considered in discussing diffusion theories is that it is not one, well-defined, unified, and comprehensive theory. A large number of theories, from a wide variety of disciplines, each focusing on a different element of the innovation process, combine to create a meta-theory of diffusion. Everett M. Rogers (1995) is the main author that tried to structure and to unify several studies and theories around IDT. He points out that a 1943 study by Ryan and Gross at Iowa State University provided the genesis of modern diffusion research. The Ryan and Gross study, from the field of rural sociology, used interviews with adopters of an innovation to examine a number of factors related to adoption. The interview-based methodology used in the Ryan and Gross study has remained the predominant diffusion research methodology ever since (Rogers, 1995).

→ Innovation

Diffusion of Innovation is a theory that analyses, as well as helps explaining, the adoption of a new innovation.

> *An innovation is an idea, practice, or object that is perceived as new by an individual or other unit of adoption. […] The perceived newness of the idea for the individual determines his/her reaction to it*. (Rogers, 1995, p. 11).

Everett Rogers (1995) defines diffusion as:

> *the process by which an innovation is communicated through certain channels over time among the members of a social system* (p. 5).

→ Adoption Process

The Innovation Decision Process theory states that diffusion is a process that occurs over time and can be seen as having five distinct stages (Rogers, 1995). Rogers differentiates the adoption process from the diffusion process in that the diffusion process occurs within society, as a group process; whereas, the adoption process pertains to an individual (cfr. also Prochaska *et al*. 1992).

Rogers describes:

> *"the adoption process as the mental process through which an individual passes from first hearing about an innovation to final adoption, […]to continue the full use of the innovation* (p. 21).

The main stages in the process are:

- knowledge;
- persuasion;
- decision;
- implementation;
- confirmation.

According to this, the potential adopters of an innovation must learn about the innovation, be persuaded as to the merits of the innovation, decide to adopt, implement

the innovation, and confirm (reaffirm or reject) the decision to adopt the innovation. Figure 4 shows the adoption process's steps and key elements affecting it: perceived characteristics of the innovation, prior conditions and characteristics of the receiver (decision making unit).

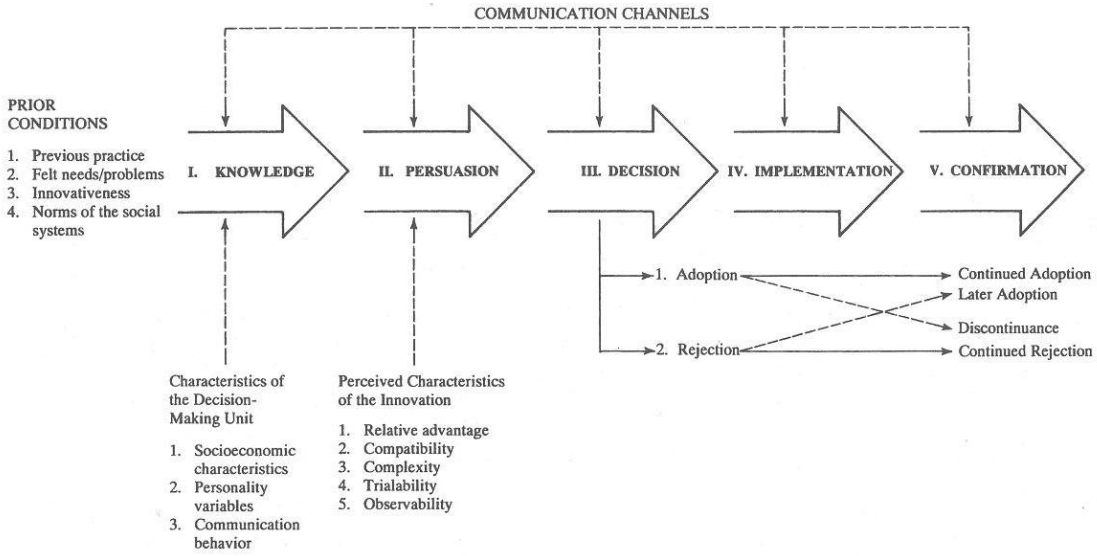


Figure 4: A Model of Stages in the Innovation-Decision Process (Rogers 1995, p. 163).

→ Perceived Attributes

The Theory of Perceived Attributes (Rogers 1995) states that potential adopters judge an innovation based on their perceptions in regard to five attributes of the innovation. These attributes are:

- trialability;
- observability;
- relative advantage;
- complexity;
- compatibility.

The theory holds that an innovation will experience an increased rate of diffusion if potential adopters perceive that the innovation: a) can be tried on a limited basis before adoption; b) offers observable results; c) has an advantage relative to other innovations (or the *status quo*); d) is not overly complex; and e) is compatible with existing practices and values.

→ Prior Conditions

It should be noted (Figure 4) that there are prior conditions affecting the innovation-decision process such as:

- previous practice;
- felt needs/problems;
- innovativeness;
- norms of the social systems.

Those conditions can motivate or dissuade receivers to adopt the innovation. The feeling about an innovation is developed on the basis of the previous good or bad experiences receivers had with other innovations, the frustration or satisfaction with their current situation, the grade of change requested by it and the culture of the environment that is going to receive it.

→ Receiver Characteristics

The Individual Innovativeness theory (Rogers 1995) states individuals who are predisposed to be innovative will adopt an innovation earlier than those who are less predisposed. On one extreme of the distribution are the *Innovators* that are the risk-takers and pioneers who adopt an innovation very early in the diffusion process. On the other extreme are the *Laggards* who resist adopting an innovation until late in the diffusion process. In particular three factors determine the position of a person between

those edges: socioeconomic characteristics, personality variables and the communication behaviour (Figure 4).

→ Context Variables

Besides perceived attributes, prior conditions and receiver characteristics (Figure 4) other elements of the context contribute to its rejection or acceptance.

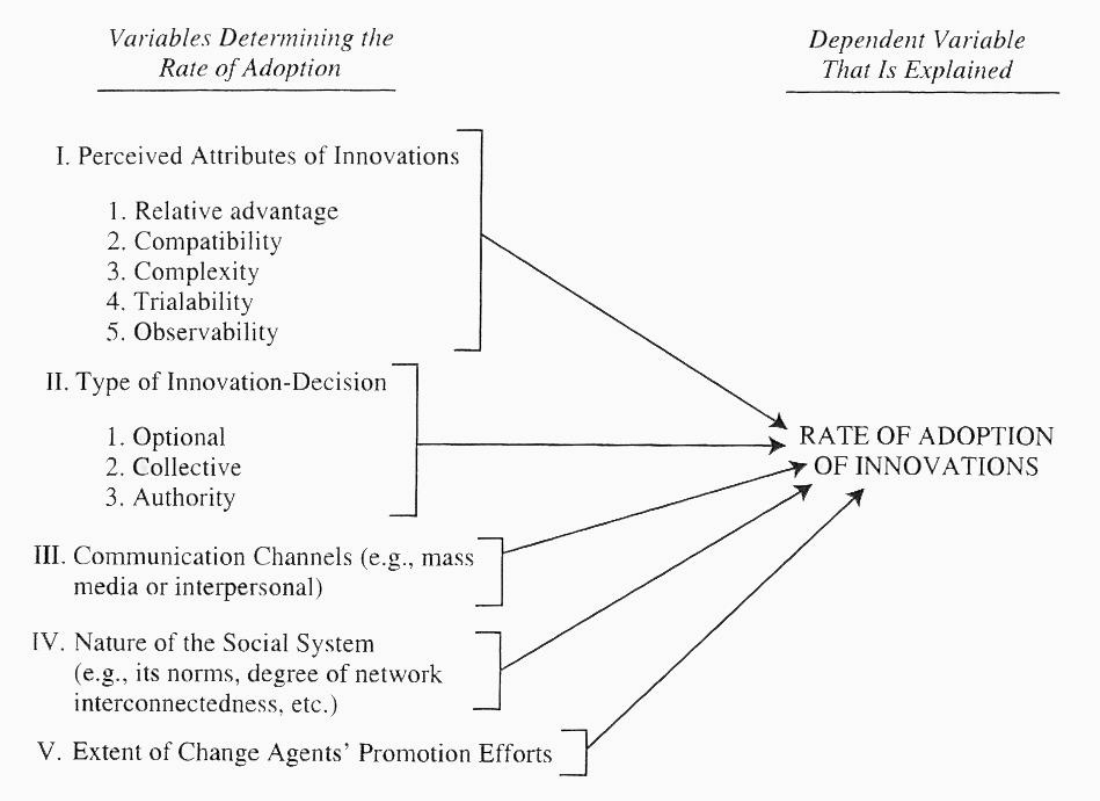


Figure 5: Variables determining the rate of adoption of innovations (Rogers 1995, p. 207).

They are (Rogers 1995):

- the type of innovation-decision;
- communication channels;
- nature of the social system;

- extent of change agents' promotion efforts.

The less people are involved in the innovation decision process, the faster the rate of adoption. The decision could be taken by an individual independent, or by members of a system, or by a relatively few individuals in a system who possess power, status, or technical expertise.

In addition, different communication channels play different roles in creating knowledge versus in persuading individuals to change their attitude toward an innovation. For example, interpersonal communication channels (rather than mass media channels) vehicle knowledge about innovations and are more important where innovations are perceived as more complex by receivers.

The nature of a social system is determined by its norms, the structure of the communication network and its interconnection.

In the social context there are change agents and opinion leaders that drive adoption through interpersonal relationships (communication flows). Their efforts in communicating with individuals affect the rate of adoption. Exchange of ideas can occur between similar individuals (homophily) or different (heterophily). It has been demonstrated (Rogers 1995) that communication is more effective when source and receiver are homophilous but also that heterophily channels have a special informational potential to carry strongly innovative ideas.

2.2.1.3. When it comes to eLearning

The study of IDT has been considered potentially valuable to the field of "instructional technology" for three reasons (Fuller 2000; Surry & Farquhar 1996). First, most instructional technologists do not understand why their products are, or are not, adopted. Second, instructional technology is inherently an innovation-based discipline. Third, the

study of diffusion theory could lead to the development of a systematic model of adoption and diffusion.

→ Goals and Philosophies

Surry & Farquhar (1997) give an overview of "instructional technology diffusion theories" identifying different diffusion goals and philosophical views. Considering their distinction (Figure 6), the present research can be put in the "adopter" approach area aiming to study, at a micro level, product usages and services. It can be described as a research area "focused on the needs and opinions of potential adopters and characteristics of the adoption context".

GOAL

PHILOSOPHY		Systemic Change (Macro)	Product Utilization (Micro)
	Developer (Determinist)	Focus on the structure and establishment of an effective organizational framework.	Focus on process of designing, developing, and evaluating effective instructional products.
	Adopter (Instrumentalist)	Focus on the social, political, and professional environment in specific organizations.	Focus on the needs and opinions of potential adopters and characteristics of the adoption site.

Figure 6: Goals and possible philosophies in Instructional Technology (Surry & Farquhar 1997).

The most interesting issue to this research is the declared need of incorporating social factors in the analysis of instructional innovation diffusion and acceptance (Surry & Farquhar 1996).

→ IDT Applications

Yates (2001) has applied IDT to a study on media literacy programs at school and concluded that an adopter-based prospective is needed for media literacy diffusion

within schools. It has been applied also as a model for evaluating potential eLearning innovations (Jones *et al.* 2002). They say that:

> *The implementation of these innovations often ignores contextual issues that can cause problems with adoption of the innovations. It is proposed the use of a model from diffusion theory through which educators can increase their awareness of potential implementation issues, estimate the likelihood of reinvention, and predict the amount and type of effort required to achieve successful implementation of specific WBE (Web-Based Education) innovations. (p. 7)*

Lewis and Norton (2000) preferred to apply the five *perceived attributes* to predict eLearning applications use rather than to answer "learners' needs". They speak quite in a provocative tone wondering if it's possible that learners know what they need. They stated:

> *"it's important to take into considerations people learning styles and preferences but many learners don't understand online learning modalities enough to assess their preferences" (p. 2).*

Marketing-oriented messages as "*give your costumers what they want*" or "*let learners tell you how to design your interventions*" often are less effective than innovation attributes in predicting their acceptance.

An other author, Fuller (2000) that was looking for an explanation of the gap between availability and use of computers in school, adopted the IDT. The study, involving many teachers of U.S. public schools, demonstrated that teacher support is more critical to student use than student support. This has been explained by Fuller with the theory about homophily and the peer communication channels (Rogers 1995).

→ Facilitating Conditions

Surry and Farquhar usually refer to instructional technology diffusion theory speaking also about Burkman's (1987) *User Oriented Instructional Model* and *Critical Factors in Adoption Checklist* developed by Stockdill and Morehouse (1992), and Ely's conditions that facilitate implementation that are reported below.

Don Ely (1990; 1999) identified eight conditions that influence the success of the implementation of innovative educational technologies.

- Dissatisfaction with the *status quo*: an emotional discomfort that results from perceiving the current method as inefficient or ineffective.
- Knowledge and Skills: an assessment of the current level of skills and knowledge of the product users.
- Adequate Resources: the amount of resources currently available to successfully implement the innovation. Resources include finances, hardware, software and personnel.
- Adequate Time: adequate time and compensated time for users to become educated and skilled in how to use the innovation.
- Rewards or Incentives: the existence of incentives that motivate users to employ the innovation, or rewards offered by the organization for those who do use the innovation.
- Participation: the involvement of key stakeholders in decision that involve planning and design of the innovation. The condition refers top all stakeholders but emphasizes the participation of product users.
- Commitment: the perception by users that the powerbrokers of the organization (i.e. Presidents, CEO, Vice Presidents) actively support the implementation of the innovation.

- Leadership: an active involvement by immediate supervisors in assisting the users in implementing the innovation.

Although presented independently, these conditions are interrelated. They affect each other by either supporting or undermining one another.

→ Implementing eLearning: the 4Es model

Facing the problems related to eLearning implementation and acceptance in higher education, Collis and Pals (2000) developed the 4Es model: Environment, Education effectiveness, Ease of use, and Engagement.

> *An individual's likelihood of voluntarily making use of a particular type of technology for a learning-related purpose is a function of the 4 Es: the environmental context, the individual's perception of educational effectiveness, ease of use, and sense of personal engagement with the technology. The environmental context and the individual's sense of personal engagement are the most important. (Collis & Moonen 2001, p. 58).*

→ Different Process Stages compared with IDT's

Levine (2001) reviewed many significant researches in the areas of acceptance, adoption, and use of innovations in order to identify levels/stages of acceptance applicable also to eLearning technologies implementation. These models certainly have their differences, but analysing the similarities of these stages will help to understand the personal and professional changes that learners will probably encounter as they use eLearning technologies. The developmental progress of any learner may follow one of these models or a combination of several models. Specific stages for each of the six models are listed below (Levine 2001).

Models not incorporating technology		
Stages of Concern (Hall & Hord, 1987)	**Stages of Change (Fossum, 1989)**	**Steps in Innovation - Decision Process (Rogers, 1995)**
Awareness	Denial	Knowledge
Informational	Resistance	Persuasion
Personal	Adaptation	Decision
Management	Involvement	Implementation
Consequence		Confirmation
Collaboration		
Refocusing		
Models incorporating technology		
Teacher's Stages of Instructional Evolution Using Technology (Dwyer *et al.*, 1991)	**Stages of Learning/Adoption of the Internet and WWW (Sherry *et al.*, 2000)**	**Stages for Learning to Use Technology (Russell, 1996)**
Entry	Teacher as Learner	Awareness
Adoption	Teacher as Adopter	Learning the Process
Adaptation	Teacher as Reaffirmer or Rejecter	Understanding the process
Appropriation	Teacher as Leader	Familiarity and confidence
Invention		Adaptation to other contexts
		Creative application

Table 3: Models of acceptance and adoption processes (Levine 2001).

2.2.1.4. The communication issue

One of the most relevant factors raised by IDT is the consideration of communication channels as a strong enabler of innovation and eLearning acceptance.

Describing context variables they recognize that the context (a social system) depends also on the norms, the structure of the communication network and its interconnection.

In the social context there are change agents and opinion leaders that drive adoption through interpersonal relationships (communication flows). Their efforts in

communicating with individuals affect the rate of adoption. Communication plays an important role in changing the attitude toward an innovation.

Exchange of ideas can occur among similar individuals (homophily) or different (heterophily). It has been demonstrated (Rogers 1995) that communication is more effective when source and receiver are homophilous but also that heterophily channels have a special informational potential to carry strongly innovative ideas.

Fuller stressed the relevance of homophily (peer communication) in the adoption of computers in school.

2.2.1.5. Synthesis

Innovation Diffusion Theory (IDT) explores and helps to explain the adoption of an innovation; in particular, Everett Rogers (1995) defines steps and outlines variables of the innovation's adoption process. Surry and Farquhar (1996) declare explicitly the added value to eLearning (instructional technology) research brought by IDT. Thanks to the inclusion of contextual factors they go beyond a discussion about technological features of different tools and new research scenarios are opened.

Many studies describing the adoption process in educational contexts can highlight the eLearning acceptance process (Levine 2001). Concerning the process several significant research in the areas of acceptance, adoption, and use of innovations are considered in order to identify levels/stages of acceptance applicable to eLearning implementation. Besides a quite detailed analysis of the adoption's process, of the adopter and of the innovation characteristics can be extensively utilised in this research.

Technology is a particular category of innovation, which shares several characteristics with it. Its peculiar features have been examined, among others, by the Technology Acceptance Model.

2.2.2. Technology Acceptance

2.2.2.1. Introduction

In the last 30 years many authors have tried to identify acceptance determinants for innovations, and in particular for technologies, in order to better understand and somehow predict users' behaviour. It is really a heterogeneous field mostly anchored in social psychology, sociology and IS (Information System) contexts. Thus, it could be useful to briefly summarise the main models in this research area.

Venkatesh, Morris, Davis and Davis (2003) made the effort to formulate a unified model for user technology acceptance. They observed the rich growth of competing models in the literature and identified and discussed eight prominent models. It follows table 4 (Venkatesh *et al.* 2003) with a brief introduction to the theories and their core constructs.

Theory of Reasoned Action (TRA)	**Core construct**
Drawn from social psychology, TRA is one of the most fundamental and influential theories of human behavior. It has been used to predict a wide range of behaviors (see Sheppard *et al.* 1988 for a review). Davis *et al.* (1989) applied TRA to individual acceptance of technology and found that the variance explained was largely consistent with studies that had employed TRA in the context of other behaviors.	Attitude Toward Behaviour Subjective Norm
Technology Acceptance Model (TAM)	
Discussed in § 2.2.2.2.	
Motivational Model (MM)	
A significant body of research in psychology has supported general motivation theory as an explanation for behavior. Several studies have examined motivational theory and adapted for specific contexts. Vallerand (1997) presents an excellent review of the fundamental tenets of this theoretical base. Within the information systems domain, Davis *et al.* (1982) applied motivational theory to understand new technology adoption and use (see also Venkatesh & Speier 1999).	Extrinsic Motivation Intrinsic Motivation
Theory of Planned Behavior (TPB)	
TPB extended TRA by adding the construct of perceived behavioral control. In TPB, perceived behavioral control is theorized to be an additional determinant of intention and behavior. Ajzen (1991) presented a review of several studies that successfully used TPB to predict intention and	Attitude Toward Behavior

behavior in a wide variety of settings. TPB has been successfully applied to the understanding of individual acceptance and usage of many different technologies (Harrison *et al.* 1997; Mathieson 1991; Taylor & Todd 1995). A related model is the Decomposed Theory of Planned Behavior (DTPB). In terms of predicting intention, DTPB is identical to TPB. In contrast to TPB but similar to TAM, DTPB "decomposes" attitude, subjective norm and perceived behavioral control into it's the underlying belief structure within technology adoption context.	Subjective Norm Perceived Behavioral Control
Combined TAM and TPB	
This model combines the predictors of TPB with perceived usefulness from TAM to provide a hybrid model (Taylor & Todd 1995).	Attitude Toward Behavior Subjective Norm Perceived Behavioral Control Perceived Usefulness
Model of PC Utilization (MPCU)	
Derived largely from Triandis' (1977) theory of human behavior, this model presents a competing prospective to that proposed by TRA and TPB. Thompson *et al.* (1991) adapted and refined Triandis model for IS contexts and used the model to predict PC utilization. However, the nature of the model makes it particularly suited to predict individual acceptance and use of a range of information technologies. Thompson *et al.* (1991) sought to predict usage behavior rather than intention; however, in keeping with the theory's roots, the current research will examine the effect of these determinants on intention. Also, such an examination is important to ensure a fair comparison on the different models.	Job-fit Complexity Long term consequences Affect towards Use Social Factors Facilitating Conditions
Social Cognitive Theory (SCT)	
One of the most powerful theories of human behavior is social cognitive theory (see Bandura 1986). Compeau and Higgins (1995) applied and extended SCT to the context of computer utilization (see also Compeau *et al.* 1999); while Compeau and Higgins (1995) also employed SCT, it was to study performance and thus is outside the goal of the current research. Compeau and Higgins (1995) model studied computer use but the nature of the model and the underlying theory allow it to be extended to acceptance and use of information technology in general. The original model of Compeau and Higgins (1995) used usage as a dependent variable but in keeping with the spirit of predicting individual acceptance, we will examine the predictive validity of the model in the context of intention and usage to allow a fair comparison of the models.	Outcome Expectations – Performance Outcome Expectations - Personal Self-Efficacy Affect Anxiety
Innovation Diffusion Theory (IDT)	
Discussed in § 2.2.1.2.	

Table 4: Models and theories of individual acceptance (Venkatesh *et al.* 2003).

Each of the models described above does not exhaust the acceptance technology issue but has been used to build a Unified Theory of Acceptance and Use of Technology (UTAUT) operated by Venkatesh *et al.* (2003).

Considering the purposes of this research only two of these theories, IDT and TAM, are discussed in this research, while TRA will be mentioned as original model of TAM.

The Innovation Diffusion Theory (§ 2.2.1.) has been already taken into consideration mainly for its focus on the individual acceptance and on context factors. The Technology Acceptance Model has been largely applied to organisations and its evolutions (TAM2 and UTAUT) show relevant acceptance determinants. It helps in answering relevant questions of this research such as: under which conditions people accept technology innovations? Which are the main determinants? Does the context influence it? Does communication plays any role?

2.2.2.2. From the Literature

The Technology Acceptance Model (TAM) is an information systems theory developed to predict the acceptance of a technology. The model suggests that when users are presented with new software or hardware, a number of factors influence their decision about how and when they will use it.

Information system (IS) investigators have proposed intention models from social psychology as a potential theoretical foundation for research on the determinants of user behaviour (Swanson 1982). Fishbein and Ajzen's (1975) Theory of Reasoned Action (TRA) is an especially well-researched intention model which has proven successful in predicting and explaining behaviour across a wide variety of domains. TRA is very general, "designed to explain virtually any human behaviour" (Ajzen & Fishbein 1980, p. 4).

Davis (1986) introduced an adaptation of TRA, the Technology Acceptance Model (TAM), which is specifically meant to explain computer usage behaviour. TAM uses TRA as a theoretical basis for specifying the causal linkages between two key beliefs: perceived usefulness and perceived ease of use, and users' attitudes, intentions and actual computer adoption behaviour (Davis *et al.* 1989).

→ TRA

The Theory of Reasoned Action (TRA) stipulates that a specific behaviour can be predicted based on the intent to behave in a certain way. This behavioural intent is influenced by a combination of a person's attitude towards performing the behaviour and subjective norm, which is the person's perception of how her reference groups expect her to perform.

Determinants of attitude are the beliefs a person holds regarding the outcome of behaving in a certain way, and her evaluation of these outcomes. Subjective norm is determined by normative beliefs, how a salient reference person thinks a person should behave and that person's motivation to comply with the reference person's wish (Fishbein & Ajzen 1980).

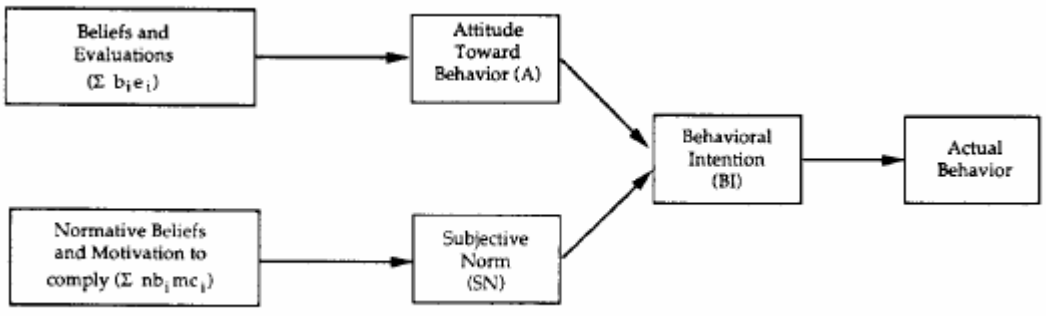


Figure 7: Theory of reasoned action (Source: Davis *et al.*, p. 984).

A particular helpful aspect of TRA from an IS perspective is its assertion that any other factors that influence behaviour do so only indirectly influencing A, SN or their relative weights (Figure 7). Thus in a technological environment, variables such as system design characteristics, user characteristics (including cognitive style and other personality variables), task characteristics, nature of the development or implementation process, political influences, organisational structure, and so on would fall into this category, which Fishbein and Ajzen (1975) refer to as "external variables".

→ How TAM differs from TRA

The specialization of TRA to the technology acceptance context results in two special features of TAM. First, TAM omits the subjective norm component that, in TRA, combines with attitude to determine intention. The development of TAM as an explanatory model led Davis *et al.* (1989) to an empirically-grounded judgment that technology acceptance does not depend on normative beliefs. Second, TAM is focused on two specific beliefs that have been shown to influence acceptance of or resistance to technology: perceived usefulness (U) and perceived ease of use (EOU). According to TAM, the likelihood of technology use is high for users who believe that it will lead to improved job performance and who believe that it is easy to use, but low for users who either doubt its benefits or perceive it as being difficult (Davis 1989).

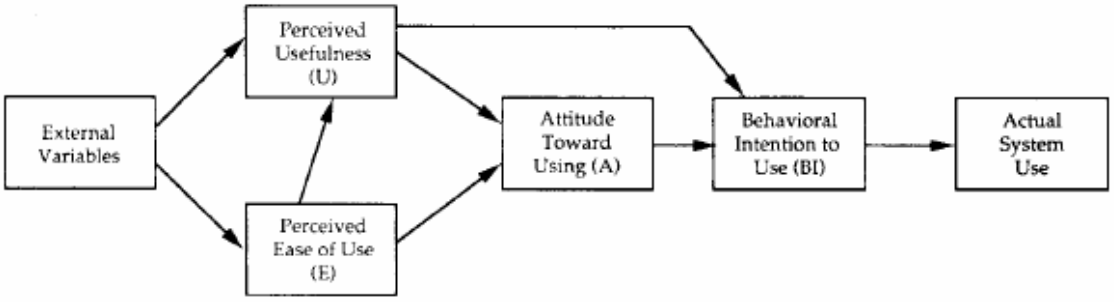


Figure 8: Technology Acceptance Model (Source: Davis *et al.*, p.985) .

→ Acceptance determinants

U and EOU are postulated *a priori* and are meant to be fairly general determinants of user acceptance. Empirical studies have shown that:

- People's computer use can be predicted reasonably well from their intentions.
- Perceived U is a major determinant of people's intention to use computers.
- Perceived EOU is a significant secondary determinant of people's intentions to use computers.

It's interesting to notice how also in an IS acceptance framework it has been recognised that a perfect product, a well-designed software or the best interface, could not replace a failure in the meaning of the whole experience, the whole process.

> *"…the usefulness of the system is even more important and should not be overlooked. Users may be willing to tolerate a difficult interface in order to access functionality that is very important, while no amount of ease of use will be able to compensate for a system that doesn't do a useful task"*
>
> (Davis *et al.* 1989, p. 1000).

→ TAM discussion and revision

Further researches have tested and revised (Szajna 1996; Veiga *et al.* 2001) the Technology of Acceptance Model and in particular TAM2 (Venkatesh & Davis 2000) and the unified model called UTAUT (Venkatesh *et al.* 2003) are relevant to this research.

Significant progress has been made over the last decade in explaining and predicting user acceptance of information technology at work. In particular substantial theoretical and empirical support has accumulated in favour of the TAM. Numerous empirical studies have found that TAM consistently explains a substantial proportion of the

variance (typically about 40%) in usage intentions and behaviour, and that TAM compares favourably with alternative models such as the TRA and the Theory of Planned Behaviour (TBP). As of January 2000, the Institute for Scientific Information's Social Science Citation Index listed 424 journals citations to the two journal articles that introduced TAM (i.e. Davis 1989; Davis *et al.* 1989).

→ The experience

Szajna (1996) introduced an objective measure of technology acceptance, actual usage rather than self-report usage. She conducted a longitudinal study on the acceptance of an electronic mail system measuring subjects' beliefs about the U and the EOU, their intentions to use the system and their usage of it 15 weeks later.

> *An interesting and important future research area for the TAM lies in determining the value and status of an experience component. The timing of the behaviour measurement in relation to the intention measurement will be important. Evidence of the significance of an experience factor may be found in an experimental sample where the subjects initially have a greater range of experience with a given technology. […] The determination of the role of experience may be the key to understanding the belief-intention-acceptance relationship.*
>
> (Szajna 1996)

→ The Culture

Veiga *et al.* (2001) denounce that the TAM literature has remained relatively silent with respect to the role that differences in national culture may play in IT acceptance. They affirm that national culture affects technology acceptance through its impact on certain key variables (Hofstede 1991) that are associated with the implementation process: a)

individualism, b) uncertainty avoidance, c) power distance, and d) long-term orientation. Thus, a culturally sensitive model of technology acceptance is needed to fill the gap of TAM (Agourram & Robson 2006).

→ TAM2

Whereas some research has been done to model the determinants of perceived EOU (Venkatesh & Davis 1996), the determinants of perceived usefulness have been relatively overlooked until 2000.

A better understanding of these determinants enables to design organisational interventions which could increase user acceptance and usage of new systems.

Venkatesh and Davis (2000) explain in TAM2 perceived U and usage intentions in terms of social influence (subjective norm, voluntariness, and image) and cognitive instrumental processes (job relevance, output quality, result demonstrability, and perceived EOU).

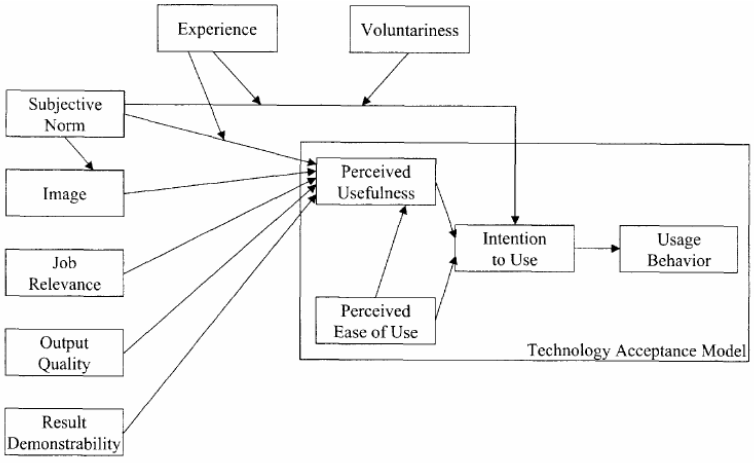


Figure 9: Proposed TAM2 - Extension of the Technology Acceptance Model (Source Venkatesh and Davis 2000, p. 188).

→ UTAUT

In an effort to combine competing theories into a single unified theory, Venkatesh, Morris, Davis & Davis (2003) proposed a composite model based on eight of the most utilized models and combinations of those models (§2.2.2.1.). The resulting product, the Unified Theory of Acceptance and Use of Technology (UTAUT), posts three direct determinants of intention to use (performance expectancy, effort expectancy, social influence) and two direct determinants of usage behaviour (intention and facilitating conditions). Significant moderating influences of variables such as experience, voluntariness, gender, and age were confirmed as integral features of UTAUT on the contrary of others like computer self-efficacy or computer anxiety.

Venkatesh *et al.* (2003) suggested:

> *"future research should attempt to "test additional boundary conditions of the model in an attempt to provide an even richer understanding of technology adoption and usage behaviour"*.
>
> (p. 470)

2.2.2.3. When it comes to eLearning

There are some applications of TAM and its extensions to eLearning experiences (Dunn 2004; Gao 2004; Gong *et al.* 2004; Huang *et al.* 2005; Liu *et al.* 2005; Nink 2004; Saadè & Bahli 2005; Wolski & Jackson 1999). Most of them propose a completion of the model introducing external variables as antecedents of perceived U and perceived EOU.

They notice the rapid diffusion of eLearning both in educational institutions and companies and recognise the need of further investigations on their acceptance and use. Originally, eLearning problems were technology related and included issues of access, connection, internet familiarity and lack of independent learning (Bürg & Mandl 2005; Keller & Cernerud 2002; Lee *et al.* 2003; Wagner & Flannery 2004). As technology

advanced, the problems shifted towards the learners' side and their acceptance and satisfaction (Saadé & Bahli 2005; Wolski & Jackson 1999).

→ Integration examples

Gao (2004) has tested the validity of the TAM model defining it an "effective tool for predicting user acceptance of hypermedia-based systems and evaluating competing hypermedia-based educational products". Huang *et al.* (2005) have introduced "learning motivation" as antecedent variable referencing them at the theory that distinguishes between: a) internal motivation, b) self-efficacy belief, and c) self-growth requirement. Hereafter, the items used to measure the correlation between variables:

Part A - Perceived usefulness	I can finish learning objects more quickly when I use e-learning systems. I can improve the learning effective when I use e-learning systems. I can learn more contents when I use e-learning systems. I can improve the learning efficiency when I use e-learning systems. I feel the content is more easy when I use e-learning systems. After careful consideration, I perceive usefulness of using e-learning systems.
Part B - Perceived ease-of-use	It is easy for me to learn how to use e-learning systems. I feel it is easy to get the e-learning system to do what I want it to do. I feel it is clear and easy to operate the e-learning interface. I feel it is flexibility of the e-learning interface (*sic*). It is easy for me to use e-learning systems. After careful consideration, I perceive ease-of-use of using e-learning systems.

Table 5: Example of the method used to measure users' intentions (Huang *et al.*, 2005, p. 12).

Gong *et al.* (2004) combined the TAM with the social cognitive theory (SCT) developed by Bandura (1986) and have demonstrated the hypothesis by which a learner's "computer self-efficacy has a positive effect on his or her intention to accept web-based learning systems".

Saadé and Bahli (2005) have proposed and verified the cognitive absorption (temporal dissociation, focused immersion, heightened enjoyment) as significant antecedent variable while Dunn (2004) inserted cognitive playfulness as an additional moderating variable on technology adoption that is not included in any of the models which the UTAUT was composed.

→ At an Academic Level

Two researches are specifically focused on the teacher's acceptance of eLearning softwares within universities.

Wolski and Jackson (1999) have declared that TAM fails to capture all of the relevant components of technology acceptance in the context of educational organizations. In particular they reintroduce the "subjective norm" variable of the original TRA model, suggesting incentives and training for teachers as key normative influence factors.

Nink (2004) on the other side indicates that a model attempting to predict acceptance and use of eLearning in an educational setting necessitates the inclusion of external variables such as experience, system characteristics and user characteristics. Szajna (1996) considers experience as an element worth of further investigations and according to Veiga *et al.* (2001) she identified cultural beliefs as key independent variables in predicting the success or failure of technology.

2.2.2.4. The Communication Issue

This research area does not identify communication as a direct determinant of acceptance or does not explicitly mention variables related to the communication issue; nevertheless following revisions of the first model reveal a deeper understanding of the complexity of the acceptance problem. In particular many context factors and the Subjective Norm determinant were re-integrated in the model. This highlights how

factors related to the users' environment and to the social relationships influence their decision about how and when they will use it. Further developments of the model could integrate communication as a variable and verify its impact onto eLearning acceptance.

2.2.2.5. Synthesis

The Technology Acceptance Model (TAM) is an information systems (IS) theory developed to predict the acceptance of a technology. The model suggests that when users are presented with a new technology, a number of factors influence their decision about how and when they will use it. TAM states that two very specific beliefs, perceived ease of use (EOU) and perceived usefulness (U) directly influence a person's attitudes about the use of the technology system (Davis *et al.* 1989; Lederer *et al.* 1998). There are some applications of TAM and its extensions to eLearning experiences; most of them propose an integration of the model introducing external variables as antecedents of perceived U and perceived EOU. In fact, investigating eLearning only as an innovative technological asset fails to consider all the factors which come into play and cannot fully explain its results. Issues such as eLearning acceptance and retention need to be further investigated and supported by models integrating different approaches (Bürg & Mandl 2005; Keller & Cernerud 2002).

TAM development in the last decades shows a methodical reflection on these issues, and its application to the eLearning field presents relevant variables, which are to be taken into consideration in this research. Besides, the Technology Acceptance is a model pluri-referenced in the literature and it has been extensively utilised in the corporate sector. It considers acceptance determinants typical of individuals in organisations on the contrary of many models exclusively developed for academic environments. Its rigorous methodology has been applied and verified with many different technologies, as well with eLearning.

2.2.3. Learning Acceptance

2.2.3.1. Introduction

In the psycho-pedagogical research area three main approaches can be distinguished so far: behaviorism, cognitivism and constructivism (Cantoni & Di Blas 2006).

The behaviorism considers observable behaviors the only interesting object to study while every personal experience or introspection of learners is excluded. Thus, the aim of every teaching activity is to change observable behaviors through the repetition of exercises (*overlearning*) based on a stimulus-response mechanism (Bloomfield 1942; Carroll 1966). Mental activities are considered, instead, by the cognitivism. An analogy between mental mechanisms and the elaboration of digital information of computers helps in understanding human behaviors (Ausubel 1968; McLaughlin 1987; Searle 1984). The constructivism or social constructivism underlines that knowledge has always a social dimension and that its growth happens through a communication exchange – a negotiation – within the learners' community (Jonassen 1991; Vygotskij 1985). It is worth mentioning the discussion about the validity/failure of the constructivist, discovery, problem-based, experimental and inquiry-based teaching (Kirschner *et al.* 2006).

In particular, there are two sectors that have studied the learning acceptance issue talking about persistence and dropout problems: the higher and the distance education ones.

Acceptance and persistence are strongly connected. It has been demonstrated that the reasons for students' dropouts are to be retrieved in the acceptance process especially at the beginning of the activity. Thus, when people abandon an eLearning course, the questions are: why do people dropout of courses? Which are the main factors affecting it? Which is the role of communication?

2.2.3.2. From the Literature

As it has been outlined in the first chapter (§ 1.2.2.), dropout is an important issue to eLearning in organisations. There is an extensive literature on the dropout issue, gathered in the last fifty years of experiences in the distance education and in the higher education sector in general (Peters 2002; Moore & Kearsley 1996; Keegan 1996). It has been taken into consideration by many researchers because the attrition rate is an important measure of the quality in education and, further, because dropout has economic and pedagogical implications. A need for research to define predictors of attrition in distance education is of particular importance because governmental funding to institutions of higher education is often based on attendance (Parker 1995). In the private sector often training investments are calculated in days per person. Thus, the participation to eLearning activities is one of the most interesting data to allocate money and calculate the return on investment (ROI) of eLearning.

→ A scheme and few definitions

Authors discuss about the dropout issue employing many terms. A basic scheme (Figure 10) shows the main concepts typically referred to by this research area and helps in finding an agreement on their meaning and definitions.

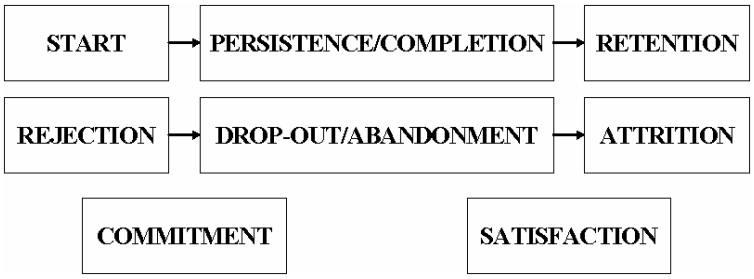


Figure 10: Learner acceptance process emerging from the literature.

As a first step it is considered the learner decision of starting or rejecting a learning activity, for example a course. An activity is considered started when a student enters the class (if the first meeting is in presence) or s/he accesses the technological system (if it is delivered online). When a learner is aware of how to access/start the course and s/he does not, the course is judged rejected. In a second moment the learner has to decide whether to persist in the course or to withdraw, dropout, abandon it. This passage is related by many authors to the *commitment* issue. The commitment to a learning activity, formed in many ways, influences the decision of a student to persist or to dropout.

Rovai (2003) defines *persistence* as "*the behaviour of continuing action despite the presence of obstacles*" and Martinez (2003) as:

> *"related to the act of continuing toward an educational goal. In higher education a persister is simply one who achieves a degree or certificate and graduates on time. In other institutions it is simple the number of individuals who complete the required course"* (p. 3).

Institutions of higher education often differentiate between the "dropout", who never returns and never completes the course of study, the "stopout," who leaves but comes back later to finish, and the "attainer", who leaves before completion but who has nonetheless achieved some personal goals — a specific skill, for example (Diaz 2002). In other settings (business or government), for financial reasons, these distinctions may be made less often and they are considered all "dropout".

Martinez (2003) defines also *attrition* and *retention:*

> "*Attrition refers to a decrease in the number of learners or students engaged in some courses of study. This course of study might be a degree plan, or it might simply be a standalone online course. Attrition takes place when a learner leaves the course of study, for any reason. […] Retention refers to the number of learners or students who progress from one part of an educational program to the next. In higher education, this*

> *is normally measured as enrolment from academic year to academic year. In other settings, retention may simply be the inverse of the attrition rate. It may be defined as the number of learners who progress from one module to the next, or from one certification to the next"*
>
> (Martinez 2003, p.3).

The last decision (Figure 10) is usually related to the *satisfaction* with the previous experience. The satisfaction toward a learning experience could be determined by many factors as the results obtained, the goals achieved, the fulfilment of expectations, the content, personal circumstances of learners, etc.
The present research is more focused on the first part of the process where the learners have to decide whether to start a course or not and if to persist in it or not.

→ Dropout in Higher Education

During the past few decades, several theoretical models of higher education student persistence have emerged. The earliest attempts to explain persistence were based on psychological models. These models (Fishbein & Ajzen 1975) theorized that a student's decision to persist is largely based on previous behaviour, attitudes, and norms that drive behaviour through the formation of intent to learn. More recent models, although grounded in these psychological models, explain persistence and attrition through student-institution fit by looking at student, institutional, and environmental variables and specific themes such as the social integration of students into campus life. An important and influential model in this field was developed by Tinto (1975, 1987, 1993; Rovai 2003).
Research on dropout in conventional higher education has largely applied a model often referred to as 'Tinto's (1975, 1987) model or theory'. The theory explains the *persistence/withdrawal* process, which depends on how well the student becomes

involved in the social and academic processes of the academic institution (Rekkedal & Qvist-Eriksen 2003). The model describes the concepts and four sets of relevant elements in casual sequence:

- Background characteristics and their influence on pre study commitment to the institution and to the goal of study.
- Academic and social integration during study.
- Subsequent commitment to the institution and to complete successfully.
- Voluntary decisions on continued study or withdrawal.

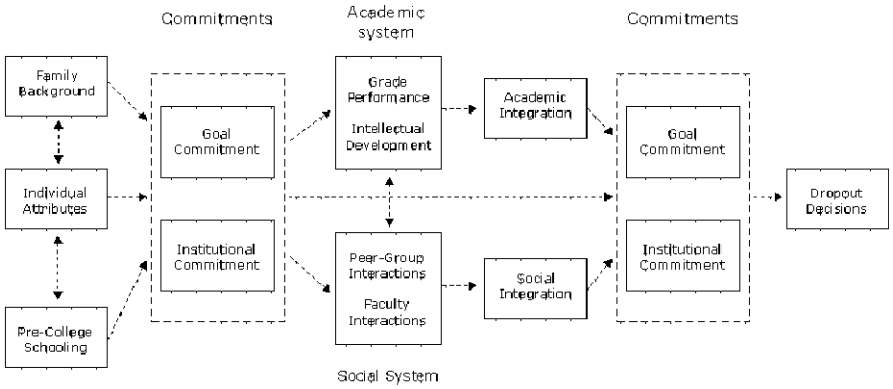


Figure 11: Tinto's (1975) model for dropout of college.

On this view the student enters the academic institution with a social and personal background that influence the commitment s/he has to the institution and to complete the studies. These background characteristics and initial commitments will influence how the student will perform and get involved in the academic and social systems. The experiences of academic and social nature during the studies will interact with the background variables and subsequently influence later the student's academic and goal commitments. According to Vincent Tinto it is the student's integration into the social

and academic systems of the institution that most directly relates to persistence/withdrawal (Rekkedal & Qvist-Eriksen 2003).

→ Learning Contract

A particular concept helps in explaining the relationship among the students, the teacher and the institution: the *learning contract* (Baruk 1985; Brousseau 1986; Filloux 1973; Chevallard 19985).

It has been largely studied in the mathematics' didactic area and it is usually described as a special negotiation that occurs explicitly or implicitly at the beginning of every learning activity. The norms about time, space, methods are here defined together with learners' expectations and learning objectives.

When it comes to distance education the definition of the learning contract needs to be planned and made explicit.

→ Dropout in Distance Education

It has been claimed that no area of research in distance education has received more attention than student persistence (Garrison 1987; Morgan & Tam 1999; Sweet 1986).

> *"Dropout has been a focal point of research in distance education. On some occasions distance educators have been criticized for being too occupied with dropout and problems connected with dropout for students and institutions. Generally, we believe that we are in agreement with most online distance educators that reducing dropout is a major challenge in the field of distance and online education"*.
>
> (Peters 1992 in Rekkedal & Qvist-Eriksen 2003, p.11)

Bajtelsmit (1988) has questioned whether Tinto's theoretical model is appropriate for use with "non-traditional" students, such as part time or workers distance students. He

proposes a model for explaining and predicting dropout in distance education that puts more emphasis on the influence of the external environment, specifically the student's occupation and family, while the concept of social integration in the institution is given a less prominent role (Rekkedal & Qvist-Eriksen 2003).

The decision to persist or not in distance education is a complex problem involving a number of interrelated factors. Different authors attribute this problem more to the individual's context (Morgan & Tam 1999), or to the individual pre-entry characteristics (Diaz 2002), or to the institutional context (Kember 1995).

> *"It is quite comforting that entry characteristics are such poor predictors of success. [...] The faculty and college do have a role to play in determining the success or otherwise of their students."*
>
> (Kember 1995, p. 32).

Gibson (1998) suggests three categories of factors that are emerged to explain and predict attrition in distance courses:

- student factors: educational preparation, motivational and persistence attributes, student academic self-concept;
- situational factors: family and employer support, changes in life circumstances;
- educational system factors: quality and difficulty of instructional materials, provision of tutorial support.

In a similar way barriers to *persistence* have been categorised into four areas by Garland (1993): situational, dispositional, institutional and epistemological.

Situational – arise from a student's particular life circumstances, such as changed employment situation, changed marital status or having a baby.	**Institutional** – difficulties students experience with the institution, such as admission requirements, course pacing, and limited support services.
Dispositional – personal problems that impact on the student's persistence behaviour, such as their attitudes, confidence, learning styles and motivation.	**Epistemological** – impediments caused by disciplinary content or else the relative perceived difficulty of that content.

Figure 12: Garland's (1993) categories of persistence barriers (Source: Morgan and Tam 1999).

2.2.3.3 When it comes to eLearning

The "eLearning dropout" phenomenon has been largely described in the introduction (§1.2.). In this section are presented the application to eLearning of Tinto's and Garland's models and possible solutions to the dropout problem suggested by different authors.

→ Rovai's extension

Rovai (2003) applied Tinto's model to online learning. He argued that distance education students have characteristics and needs that differ from "traditional" learners and that the virtual learning environment differs in important ways from an on-campus environment. He draws mainly from Tinto's and Bean and Metzner' (1985) models and from the results of other research on the needs of online distance education students (Cole 2000), in order to synthesise a composite model; its purpose was to better explain persistence and attrition among the largely "non-traditional" students that are enrolled in online courses.

This model is divided into student characteristics, skills prior to admission and external and internal factors affecting students after admission.

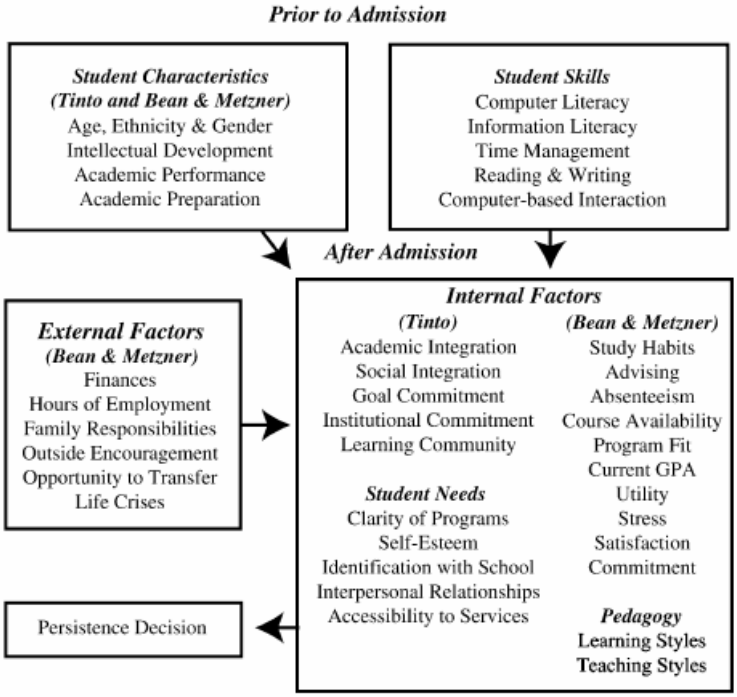


Figure 13: A composite persistence model (Source: Rovai 2003).

→ Garland's Extension

Garland's (1993) areas (Figure 12) have been expanded by other research (Mungania 2003; Schilke 2001) focused on eLearning. Mungania (2003) identified seven heterogeneous categories of barriers to eLearning encompassing: (1) personal or dispositional; (2) learning style; (3) instructional; (4) situational; (5) organizational; (6) content suitability; (7) technological barriers.

The findings of her study reveal that "situational" barriers are the most prevalent while "personal" barriers are the least common.

→ Suggestions and possible cures to eLearning dropout

Allison Rossett (Rossett 2004) analysing the dropout problem in companies identifies three areas of intervention: I) the asset; II) the organization; III) the eLearners

themselves. She declares that, in general, eLearning success depends on high quality materials, a fertile culture, and employees who have been prepared to take advantage of the assets (Rossett 2003). At this purpose an other article (Rossett & Schafer 2003) outlines a checklist of self-questions for a well-equipped eLearner. Factors regarding the organisational context (II) will be considered below more extensively.

I) The asset

Margaret Martinez (2003) declares that eLearning outcomes, including completion rate, increase when the instructional presentation adapts to the learner's aptitude, expectations and personality. In general she identifies the main reason of eLearning dropout in a mismatch between learning orientation and eLearning design. Too many learners lack adequate preparation for the rigors of eLearning and are less likely to complete programs of courses. A different author, Oblender (2002), suggests a hybrid course model (blended course) because it addresses the major weakness of online courses: the lack of structured time for student work.

Studies on instructional design have been developing many models to create effective learning products and activities (Andrews & Godson, 1995; Morrison *et al.* 2003). Those models are being applied to eLearning bringing many implications but they will not be discussed and considered in this research (Botturi 2006; Oliver & Herrington 2001).

Moreover, many studies investigate the technological environment of the learning experience (Piskurich 2002; Salmon 2002) or propose guidelines and suggestions in order to produce effective and quality learning materials for eLearning activities (Brown & Voltz 2005).

II) The Organisation

Frankola (2001) reports some eLearning experimentations within companies and identifies the main critical areas of intervention, which are:

i) lack of time;
ii) lack of managerial oversight;
iii) corporate motivation;
iv) learners' expectations and preparation.

i) Lack of time

Findings revealed that most participants had positive attitudes regarding eLearning, but time required to complete courses was the major factor contributing to dropping out. Solutions included restructuring eLearning courses to emphasize and manage time requirement expectations through course descriptions, e-mail, course announcements, and online orientation (Phillips *et al.* 2004).

Phillips *et al.* assert that the inclusion of the time requirement with each course description would be of benefit to the course participants as they select an online course. By allowing course participants to self-select courses with time requirements that match their lifestyles, the success rate of course participants is anticipated to increase. Online course instructors should include time requirement expectations in their course descriptions. This information can also be included in an introductory email to the course participants prior to the first online class meeting. Course announcements can be utilized to inform online learners of specific time requirements expected for each lesson.

ii) Lack of managerial oversight and Corporate Motivation

Frankola (2001) proposes some tips and strategies that can help in achieving good completion rates.

- Develop a culture that takes online learning just as seriously as classroom training;
- do individual comparison;

- hold managers accountable for the success of their employees;
- use managers as role models;
- create a social dimension to eLearning;
- make expectations clear up front;
- provide formal rewards;
- hold a team competition;
- track performance;
- get personal;
- launch a communication campaign.

Also the research conducted by ASTD and The Masie Center (2001) found out many aspects of the eLearning context through which organizations could influence learner acceptance as well as satisfaction (§1.2.).

iii) eLearners' Expectations

Inan (2004) conducted an extensive literature review on dropout in distance education and divided the researches on the issue between those focused on the learner and those focused on the program itself. In addition he concluded that the main problems from an eLearner 's perspective is that students do not know online course requirements and this new learning context.

> *"To be a student in an online course is completely different from being a student in a traditional course. Traditionally, students expect teachers to be available and give instant response for their question. Being a part of the traditional classroom setting for years, students expect the same type of regularities"* (p. 9).

And again Martinez (2003) says:

> *"They have no idea of being responsible from their own learning because their previous educational experiences have not prepared them for this learner-centered setting"* (p. 3).

iv) Learners' Preparation

Rovai (2003) on this issue writes that:

> "*deficiencies in academic preparation and online student skills can be remedied through early intervention efforts. Remediation and integration efforts can be presented either online or on-campus in a hybrid blend of face-to-face and distance education technologies. An initial face-to-face residency can be a great opportunity to address these coping skills and facilitate the formation of informal study groups for new online students. All such efforts have the potential to increase persistence*" (p. 13).

For instance, many of them underestimate time requirements of online courses. In contrast to student anticipation, online courses require more time commitment (Arsham 2002). To prepare students to this new environment, creating orientation is suggested by many researchers (Prendergast 2003). Arsham (2002) suggested that creating and implementing an orientation course can reduce student dropouts.

Arsham (2002) says:

> "*the most effective means of reducing dropout rate is preparation. The creation and implementation of a required online student-orientation and preparation course certainly helps significantly*".

Further research into the problem indicated that the domain of online learning was new to students; many lacked fundamental computer skills and were newcomers to the internet. This lack of experience impinged on their ability to adapt to the new learning environment.

Lynch (2001) also proposed the implementation of a student orientation course. The attrition rate of online students was reduced to an average of 15% and re-enrolment increased to 90%. Assist students in becoming aware of adult learning theory that they can apply to their context. Key elements of the course and author recommendations are:

- to elicit self-awareness of personal suitability for the web-based learning environment;
- to analyse and discuss adjustments students might make to increase success in their studies;
- provide students many opportunities to engage in extensive web-based interaction and communication with their instructors and their peers;
- allow significant time for student reflection on this new environment.

III) The eLearners themselves

The successful eLearner is usually described as an autonomous, independent, self-directed learner (Tucker 2000). Other studies found no correlation between learning style and learning outcomes and there is a growing belief that self-directed learning is situational. It is not always the best approach of instruction for all adults, and there are times, places, and circumstances when it should not be used at all (Grow 1996). Such a belief supports the view that online courses should support multiple learning styles.

Taylor (1995) suggested to promote self-directed learning in students, involving them in decisions concerning what is to be learned, when and how it should be learned, and how it should be evaluated. In addition, learners should be allowed to pursue their own interests so that learning becomes more meaningful.

2.2.3.4. The communication issue

The communication issue is mentioned when it comes to eLearners' preparation before an eLearning activity and to their institutional commitment.

Communication, though, emerges to be an important mean at the beginning of the eLearning activity. Verbalization is the best way to negotiate eLearners' expectations, to inform them about course details (time, space, method, calendar …) and to define the learning contract.

Moreover, the possibility to create an adequate environment to eLearning is strongly correlated to the capacity of the organization to drive context variables such as social integration and corporate motivation.

There is a strong relationship between communication and learning that can be understood in both directions, exploring the role of communication in education as well as the one played by education in the communication field.

The education of human beings could not be possible without communication, be it non verbal or verbal (Augustinus Hipponensis, *De Magistro*). Education, as seen (§ 1.1.2.), is further required to acquire and master all the "technologies of the word", giving birth to media education, digital literacy activities and so on (Cantoni 2006).

2.2.3.5. Synthesis

Investigating the acceptance issue, helpful support comes from higher and distance education research tradition. It is a big and well-defined research area, which collected many contributions in last fifty years. Due to the relevance of the topic a great effort has been done in understanding the dropout problem and in identifying taxonomies of variables affecting it. The decision to persist or not to persist in distance education is a complex process involving a number of interrelated factors peculiar to the individual's background.

Even if widely criticised, Tinto's Student Integration Model (Tinto 1975) remains the most influential model of dropout for tertiary education (McCubbin 2003).

The model has been applied in research on attrition in full time education, but it has also been largely applied to and/or extended in studies on professional training, distance education and eLearning (Rovai 2003; Sweet 1986, Bajtelsmit 1988, Rekkedal *et al.* 2003). More emphasis is given on the influence of the external environment and studies confirm that the persistence/withdrawal process depends on how well the student becomes involved in the social and academic processes of the academic institution (commitment).

Many other authors tried to identify general factors affecting eLearning acceptance within organisations. Those variables are focused on a variety of different aspects concerning eLearner characteristics and experiences, contents, technology assets or organisational environment.

3. Defining the Map of eLearning Acceptance (MeLA)

In order to define a sound map and a framework for eLearning acceptance, the concept of “acceptance” will be carefully analysed in this chapter. The comparison of different definitions will lead to a comprehensive description of eLearning acceptance that goes beyond its common interpretation as mere technical start of an eLearning activity (§ 3.1.). The semantic analysis will play an important role in enriching and deeply explaining steps and implications of the acceptance process.

Different views of authors on the acceptance process will be gathered together in a unique map (§ 3.2.) and relevant factors and variables listed in the literature will be also classified to better comprehend their impact on the acceptance process (§ 3.3.). The MeLA (Map of eLearning Acceptance) finally proposes a framework of analysis for the implementation of eLearning activities in organisations (§ 3.4.).

3.1. Acceptance Definition

Moving from an overview (§2.1) of authors with such different backgrounds and approaches, an integrated and comprehensive definition of acceptance needs to be formulated. In fact, it emerges in the literature that acceptance has not a unique definition and that people could refer to the "acceptance concept" with different terms such as *adoption* (Rogers 1995), *use* (Davis 1989), or *persistence* (Tinto 1975). IDT definition of *adoption* is "a decision to make full use of an innovation as the best course of action available" (Rogers 1995), while TAM describes technology acceptance as "users' decision about how and when they will use technology" (Davis 1989). However, we understand that for eLearning, as a learning experience and not only as a technological innovation, a more complete and wider definition has to be found. Something relevant, in fact, is added by the definition of "learning acceptance" referred to as persistence: "the act of continuing toward an educational goal" (Martinez 2003).
In the next two paragraphs it will be shown different meanings, uses and fields of application of the term "acceptance" and a semantic analysis will be conducted in order to achieve a better understanding of it and to outline a comprehensive definition.

3.1.1. What is acceptance?

A common sense definition of acceptance is the positive answer to an offer or a proposal. I can accept a contract; I can accept a gift from someone; I can accept an invitation. Acceptance formally could be a:

- *credence*: the mental attitude that something is believable and should be accepted as true. e.g.: "he gave credence to the gossip"; "acceptance of Newtonian mechanics was unquestioned for 200 years";

- *reception*: the act of taking something that is offered. E.g.. "her acceptance of the gift encouraged him"; "he anticipated their acceptance of his offer";
- *adoption*: the act of accepting with approval, a favourable reception. E.g..: "its adoption by society"; "the proposal found wide acceptance";
- *status*: the state of being acceptable and accepted. E.g.: "Torn received no acceptance at the country club";
- *decision*: contract law words signifying consent to the terms of an offer (thereby creating a contract);
- *toleration*: a disposition to tolerate or accept people or situations. E.g..: "all Americans should accept black people";
- *banking:* a time draft drawn on and accepted by a bank.

(Webster's Online Dictionary)

3.1.2. Semantic analysis

A linguistic semantic analysis (Rigotti and Cigada 2004) of the term "acceptance" could lead to a better comprehension of its meaning and to a complete definition of it.

First of all, it is necessary to distinguish among two uses of the verb "to accept":

1. to accept an event, a fact or a person (its characteristics);
2. to accept a proposal or an object from someone.

Only the second meaning will be considered in this analysis as long as in a formal learning activity an offerer and a receiver are always implied.

The verb "to accept" has three argument places. Someone (X_1) accepts something (X_2) from someone (X_3).

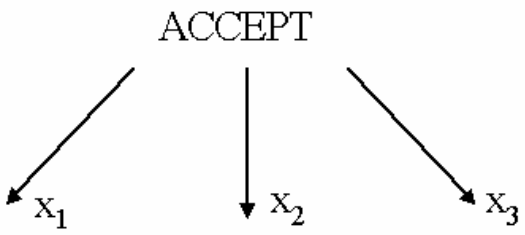


Figure 14: The semantic analysis of the term "to accept".

The verb presupposes that X_1 and X_3 are human beings and X_1 is free to refuse the offer; differently, X_2 is usually a material or immaterial "object": I accept an apple, a contract, an idea but not a person; the action is reactive because it always follows an offer or a proposal.

Implications of the acceptance action come out better making the negative construction of the term "to accept" (negation test).

"I accepted the invitation to the party but I did not realize what I was doing".

To accept is always an aware action; when someone decides to accept something, it needs to be decided and it does not happen by accident.

"Would you like me to break your arm?";

The offer should be benevolent and the offerer does it usually in the interest of the receiver. The person who offers, thinks that the object (X_2) can be integrated in the good of X_3.

"I don't accept this contract".

It means that the offer does not represent an actual benefit for the receiver.

There is an other way to refuse an offer that reveals an additional facet in the meaning of acceptance.

“A stranger offered to me a cake but I didn’t accept it”.

“I didn’t accept the contract as I didn’t know that company”.

The acceptance of something implies a certain degree of knowledge of the offerer and of the object.

“I couldn’t accept her present; If I would have accepted the present, she had thought we were still friends”.

The decision to accept something reveals a positive relationship between X_1 and X_3.

“I accepted the invitation but I forgot to answer”.

To make the “acceptance” effective, an explicit action is required as a signature or – in the case of marriage – the utterance of “yes”. These actions belong to a particular set of verbal acts called commissive (Austin 1962; Searle 1969), which imply a commitment by “who accepts” and presuppose a commitment by “who offers”.

“I signed the contract proposed by the cable company for a one-year package but the following day I changed my mind”

Even if human beings are always free of change their opinions, the intension to persist in the decision and the time dimension are always implied in the acceptance action, and withdraw is never without problems.

3.1.3. Drawing a first Map

As seen, a common definition of acceptance is “the positive answer to an offer”. One can, for instance, “accept a contract”, or one can “accept a marriage proposal”. In both

cases, *before* the acceptance act, one needs to know well and to be in relation with the person s/he is interacting with and informed about the object or the situation s/he is facing. To make the "acceptance" effective, an explicit *action* is required as a signature or an explicit verbal declaration (as in the case of marriage the utterance of "yes"). These commissive actions imply a *consequent* commitment by who accepts.

So, the *action* is what makes acceptance effective and occurs always if some prerequisites are given (*pre*) and it is followed by its implications (*post*).

Beside those three passages, two important components, *knowledge* and *commitment*, run in parallel, and grow together up to the decision stage, supporting it also after the *action* moment. In fact, the *knowledge* of the offer/object mature also afterwards, offering a deeper understanding through a direct experience of it. The *commitment* occurs "officially" with the *action* even if somehow it starts before. It continues growing until the end of the process and its presence is extremely important to the decision of persisting or not.

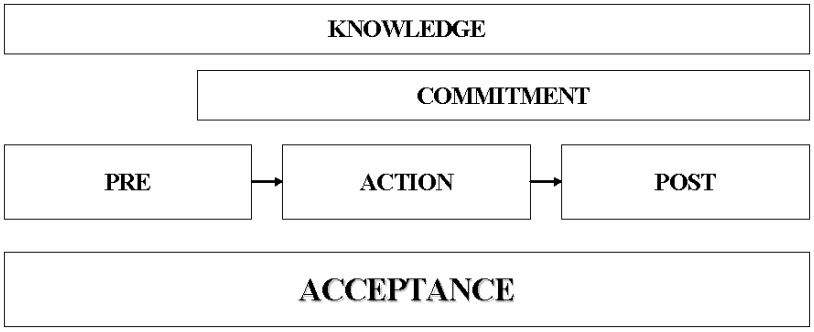


Figure 15: Acceptance's components and phases.

3.2. The Acceptance Process

It has been observed that the idea of acceptance obtained with the semantic analysis (Figure 15) could be recognised in the three areas of the literature, analysed in chapter 2. Main phases of the process have been identified and classified in accordance with the three proposed macro-categories: *pre*, *action* and *post*. *Knowledge* and *commitment* components are also differently present in the three approaches. Their integration in a unique framework highlights relevant issues to the eLearning acceptance process as it is explained in the last section.

3.2.1. IDT Acceptance

IDT define the positive reaction to an innovation as *adoption* and it defines:

> *"the adoption process as the mental process through which an individual passes from first hearing about an innovation to final adoption, […] till the individual decides to continue the full use of the innovation"*
> (Rogers 1995, p.21).

The stages in the process are: *knowledge*, *persuasion*, *decision*, *implementation*, and *confirmation*.

It is interesting to notice the temporal dimension of the adoption act; it occurs in a process over time and follows different steps. IDT distinguishes the mental process through which the person comes to decide to refuse/use the innovation and the confirmation of this action. As for a linguistic neologism it is not considered accepted something that it is not full used by speakers, the same happens for an innovation that has to be fully implemented and regularly used by individuals to be declared accepted.

Acceptance of an innovation is something more than its adoption; it is included in the definition but it needs a further confirmation in a second moment after the first use.

3.2.1.1. Stages

In the literature many models (§2.2.1.) emerged that described the acceptance and the adoption process. Levine (2001) compared the stages of six models including the Roger's one. In table 6 there are listed the 25 phases discussed by authors, and they are mapped onto the three macro-stages of the MeLa framework.

PHASE	**AUTHOR**	**PRE**	**ACTION**	**POST**
Adaptation	Fossum 1989; Dwery *et al.* 1991; Russell 1996		X	
Adoption	Dwery *et al.* 1991; Sherry *et al.* 2000		X	
Appropriation	Dwery *et al.* 1991			X
Awareness	Hall and Hord 1987; Russell 1996	X		
Collaboration	Hall and Hord 1987			X
Confirmation	Rogers 1995			X
Consequence	Hall and Hord 1987			X
Creative Application	Russell 1996			X
Decision	Rogers 1995; Sherry *et al.* 2000		X	
Denial	Fossum 1989	X		
Entry	Dwery *et al.* 1991		X	
Familiarity	Russell 1996			X
Implementation	Rogers 1995		X	
Informational	Hall and Hord 1987	X		
Invention	Dwery *et al.* 1991			X
Involvement	Fossum 1989			X
Knowledge	Rogers 1995	X		
Leading	Sherry *et al.* 2000			X
Learning	Sherry *et al.* 2000; Russell 1996	X		
Management	Hall and Hord 1987		X	
Personal	Hall and Hord 1987	X		
Persuasion	Rogers 1995	X		

Refocusing	Hall and Hord 1987			X
Resistance	Fossum 1989	X		
Understanding/ Applying	Russell 1996		X	

Table 6: IDT acceptance stages and their focus.

Stages proposed by authors have been classified in general macro-areas. Their collocation in one of the three categories is based on the author definition of the category but it is not subject to a unique interpretation. Few of them are common to one or more models as it is indicated in the second column. This integration of different models in a unique grid shows the richness that subtends each macro-category.

The *pre* category represents a preparation phase to the adoption/refusion of the innovation in which the receiver acquires knowledge about the innovation and forms her/his decision that will be revealed in the *action* stage. In a third moment s/he can confirm his decision and understanding better the innovation becoming more competent and creative in its use. Thus, IDT provide a stage after (*post*) the *action* phase even if it is not really interested in the consequences of the adoption of an innovation or in the achievements of any purposes through it.

The *knowledge*, acquired about the innovation, is more relevant than the *commitment* component as long as there is no specific goal to achieve.

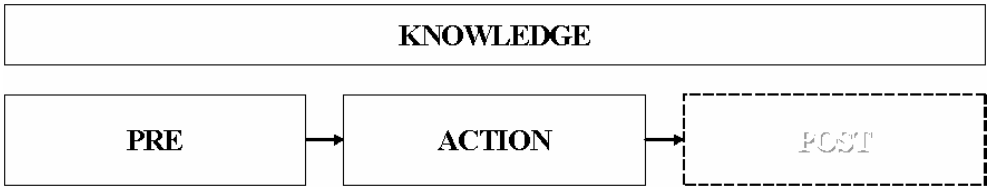


Figure 16: IDT acceptance components and phases.

3.2.2. TAM Acceptance

TAM describes technology acceptance as a “user’s” behaviour. The model, grounded in social psychology, is focused on the *use* action of individuals and it defines acceptance as “the decision about how and when they will use technology” (Davis 1989).
They tell apart the decision process preparation composed by the “attitude toward using” and the “behavioural intention to use” and the subsequent “actual system use”. They do not investigate following actions and they are not interested in the reaction and in the involvement of users with the technology after the first experience.

3.2.2.1. Stages

Basically the stages in the acceptance process considered by TAM and its subsequent developments are three. This model was built in order to measure the “intention” and the “attitude” toward the using of a technology and its actual “use”.

PHASE	**AUTHOR**	**PRE**	**ACTION**	**POST**
Attitude	Davis *et al.* 1989	X		
Intention	Davis *et al.* 1989	X		
Use	Davis *et al.* 1989		X	

Table 7: TAM acceptance stages and their focus.

Their behavioural approach to the human activities considers the measure of intention and attitude as exhaustive *pre*-determinants of the use or non-use by individuals. In this model the *commitment* component is considered as a consequence of a well-formed attitude. The goal of the process is the use of the technology and TAM model is not interested in a confirmation stage of it and in future actions of individuals.

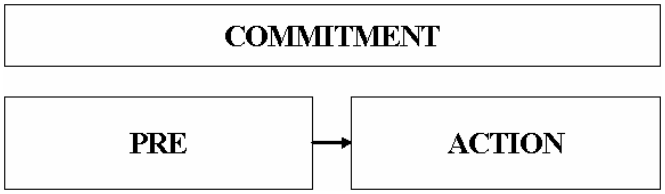


Figure 17: TAM acceptance components and phases.

3.2.3. Learning Acceptance

Acceptance and persistence are strongly connected (§2.2.3.) and as the causes of students' dropouts they are mainly grounded in the *entry* phase (*pre*). Dropout studies, thus, have been analysed in order to define what acceptance and what the positive answer to a learning activity is.

A learning program would be defined accepted when a learner decides to start it and to persist in the decision. The learner subscribes a learning contract (Baruk 1985; Brousseau 1986; Filloux 1973) before starting a learning activity, thus, the mere starting of the activity is not enough to consider it accepted.

Thus, "learning acceptance" implies the concept of *persistence*: "the act of continuing toward an educational goal" (Martinez 2003). It entails the temporal dimension typical of a process and the presence of a goal to be achieved (*post*). It goes beyond the idea of technical use mentioned by technology studies. Learning acceptance comprehends the learners' effort that takes place at the very beginning of the activity and their *commitment* in persisting in the activity.

The decision to persist happens in different moments not only in a single one as in a cost/benefit decision cycle (Kember 1995). So, departure from study may occur before really starting to study, early or later in the first unit, when deciding to embark on the second unit, the next course etc., until final examination.

3.2.3.1. Stages

The higher and distance education research areas speak about the learning acceptance process referring to specific concept and phases (§ 2.2.3.). In particular eight stages can be identified from authors' discussion about dropout and persistence.

PHASE	AUTHOR	PRE	ACTION	POST
Attrition	Martinez 2003			X
Commitment	Tinto 1975, Bajtelsmit's 1988		X	X
Completion	ASTD & Masie 2001			X
Drop-out/ Abandonment	All			X
Entry	Tinto 1975, Bajtelsmit's 1988	X		
Persistence	Martinez 2003; Rovai 2003			X
Retention	Martinez 2003; Rovai 2003			X
Start	ASTD & Masie 2001		X	

Table 8: Learning acceptance stages and their focus.

Some authors consider entry learners characteristics and start conditions extremely important in the learning process and they are often treated as objective data and not as modifiable elements (*pre*). The motivation and the *commitment* are declared activated at the very beginning of the activity even if *knowledge* and preparation on the learning experience are generally overlooked. If entry conditions are favorable, then (*post*) the environment can be designed to support learners' *actions* and decisions.

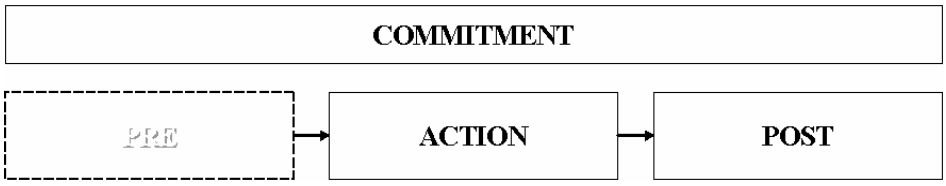


Figure 18: Learning acceptance components and phases.

3.2.4. Integration of different Models

According to a semantic analysis (Rigotti & Cigada 2004) of the term “acceptance”, were identified three macro-phases in the acceptance process that were recognised in different research areas: a) *pre*, b) *action* and c) *post* (§ 3.1.2.).

Listing and classifying the different stages emerged in the literature review, those with common characteristics were grouped together in the categories.

- *Pre*: it can be generally defined as “anything contributing to become ready for the action” and it concerns mostly the cognitive level. In this phase, people, users, or learners shape their expectations about the new “element”. They receive information on it, remember previous similar experiences, listen to peers and opinion leaders’ suggestions, and consider their personal perception of it.
- *Action*: it refers to the actual decision, the acceptance/adoption behaviour. The use of software, the physical presence in a classroom, or the start of an activity is the moment in which people, users, or learners have to (partially) adapt their previous expectations to the actual experience they are having. It is also the phase in which they familiarize themselves with the environment and encounter their first usage problems.
- *Post*: this is the “anything after the action” phase and it concerns the meta-cognitive level. A judgment of the experience occurs and it is decided if it is worth repeating the action or not. It is the period in which actors get involved in the process, become more proficient and could develop a more creative attitude.

3.2.5. Acceptance of eLearning

ELearning acceptance is the process considered in this research and a further description for it is provided. ELearning has been defined as intersection of three areas and components as *innovation*, *technology* and *learning* (§ 1.1.) and in order to comprehend eLearning acceptance all the three elements were considered.

When one accepts a technology asset it is because s/he formed an attitude toward using it and because s/he actually uses it. IDT and TAM are focused on this action and on the preparation before it. They also mention the necessity of a further confirmation in the innovation decision process (Rogers 1995) and the longitudinal verification of the use (Szajna 1996), but they are basically interested in the "use action" of final users and in previous conditions facilitating it.

If our "asset" is an eLearning activity, can one be satisfied if eLearners simply enter the platform? May one declare that the course has been accepted?

The analysis of the learning acceptance (§ 2.2.3.) underlines the *commitment* issue and adds specific goals that characterize also an eLearning experience. Besides in any learning activity (Cantoni, Botturi & Succi 2007) the presence of learning goals to be achieved and the steps leading the learners to it are explicit.

Thus, acceptance of an eLearning activity needs an initial phase in which eLearners are prepared to accept the innovation, a physical and technical start of the learning experience, and a strong commitment in persisting in the activity. The phases characterising the eLearning experience acceptance (Figure 19) process are:

- *Preparation*: potential eLearners get information about the activity; they are invited or requested to participate; they learn what eLearning means or remember some previous experiences; they shape their expectations about contents and instructions; they speak about this with colleagues etc.

- *Start*: eLearners physically enter the online activity (in the case of a blended course this could follow a starting presence session). Here they face all the main technical problems that can occur; they can ask for help (technical support), experience the new environment, adapt previous expectations etc.
- *Persistence*: the eLearners' persistence in the activity depends mainly on how they judge the experience they are having. It is a continuous cost/benefit decision based on many factors. A healthy commitment, grounded in the *preparation* phase, will lead the eLearners to the end of the activity.

Two components are present in the process: *knowledge* and *commitment*. They represent the cognitive and meta-cognitive levels involved in any learning process (Manning 1991; Osman and Hannafin 1992).

ELearners start acquiring knowledge about the eLearning activity at the very beginning and it will continue to increase till the end of it. Knowledge about a learning experience become deeper and creative during the acceptance process and it can be considered a "resource" of the *commitment*.

The second component is the eLearners' evaluation of the experience they are having. The *commitment* in an eLearning activity is the energy that allows students to achieve the activity's goals and it is strongly connected to the *knowledge* component although not fully dependent on it. In fact, if the knowledge of the activity is insufficient (for example an eLearner is not aware of an intermediate test; it would be more likely that s/he dropouts the activity. Figure 19 graphically synthesizes the eLearning acceptance components and macro-phases presented.

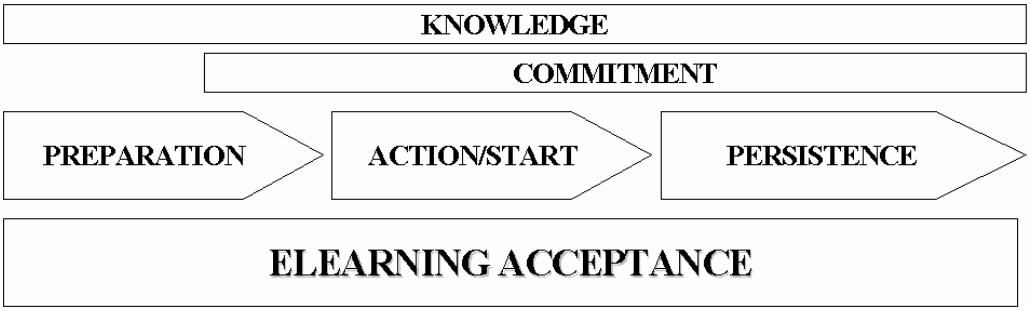


Figure 19: eLearning acceptance components and phases.

3.3. Acceptance variables

The acceptance process has been investigated and analysed in the prior section and here it is proposed an answer to the other question that researchers asked themselves (§ 1.3.4.): which are the main variables affecting the acceptance process?

Many studies suggest explanations for eLearning (innovation, technology and learning) acceptance and/or failure. Set of variables and key determinants are usually listed and gathered according to some categories. It is possible to organize variables and factors in three general macro-areas (Rossett 2004; § 2.2.3.2.) according to authors' description.

- eLearner (eL): this category includes eLearner characteristics, going from the age to the learning style, mentioned by authors as possible determinant factors of the eLearning experience. Several researches have been conducted to identify aptitudes, attitudes and skills of a good eLearner.
- Asset (A): the technological features and the design of eLearning tools and experiences can affect the acceptance process. Instructional design studies focus on the quality of content, on the method or on the proper mix of different methods (blended learning) while technology experts investigate perceived attributes, usability and reliability of the tools.
- Organizational context (O): the environment surrounding the eLearning experience, as the support provided to eLearners, the relevance of the activity for the job, physical conditions, and the management commitment, have been largely considered as factors affecting the eLearning acceptance process.

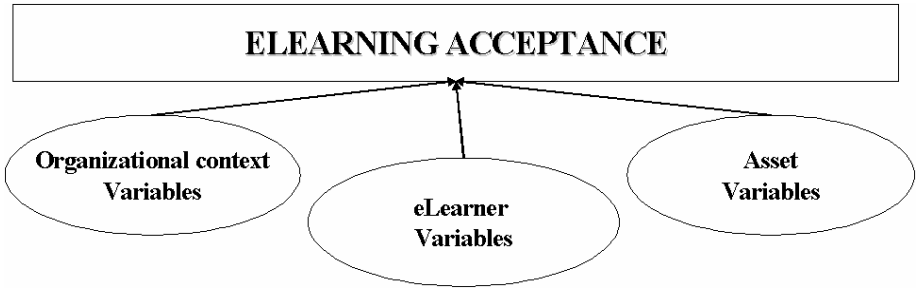


Figure 20: eLearning acceptance variables.

Three sections follow for each of the literature areas taken into consideration in this research. Variables raised from authors of the three research areas will be listed and gathered in sub-categories. This section does not aim at listing all the variables affecting eLearning acceptance but rather to gather the variables mentioned in the literature review with a special attention on organization and context variables.

It has to be noticed that many variables identified by authors have been merged on the base of researchers' reflections and on case studies' experiences (§ 4.2.).

3.3.1. IDT Variables

Factors mentioned by Rogers (1995) as relevant from the IDT are:

- perceived attributes;
- prior conditions described
- receiver characteristics.

Perceived attributes (trialability, observability, relative advantage, complexity, compatibility) are intended as asset's qualities perceived by the final user. They depend on the characteristics of the innovation but also on the organization's effort to communicate them and to build the awareness of users.

Prior conditions regard external conditions that have preceded or that surround the eLearning experience. In fact the degree of satisfaction or innovativeness perceived by users, for example, will depend on their previous personal experience with technological tool. On the other side, any user of an innovation has a different socioeconomic context and a different attitude toward the use of innovations.

In table 9 it is possible to observe the each single variable, its categorisation among the three major areas[1], and the author who referred to that concept with that term[2].

TYPE	**VARIABLE**	**AUTHOR**
O and eL	Communication behaviour	Rogers 1995
O and eL	Dissatisfaction with the status quo	Ely 1999
O and eL	Engagement	Collis & Pals 2000
O and eL	Felt needs/problems	Rogers 1995
A	Innovativeness	Rogers 1995
O	Norms of the social systems	Rogers 1995
O and eL	Peer communication	Fuller 2000; Rogers 1995
O and A	Perceived Compatibility	Rogers 1995
O and A	Perceived Complexity	Rogers 1995
O and A	Perceived Observability	Rogers 1995
O and A	Perceived Relative advantage	Rogers 1995
O and A	Perceived Trialability	Rogers 1995
eL	Personality variables	Rogers 1995
eL	Previous practice	Rogers 1995
eL	Socioeconomic characteristics	Rogers 1995

Table 9: eLearning variables from IDT.

[1] A variable could belong to one or more categories according to its definition.

[2] Different authors referred to the same concept using different terms or vice versa they use a term to refer at slightly different concepts. The list in the table is an interpretation based on the literature review.

From this grid it appears that factors affecting the IDT acceptance process belong to all the three categories. For example the compatibility of an eLearning platform depends on its characteristics (e.g. if designers respected SCORM standards, if it can import files from older versions …) but also on its employment in the organisation in accordance with the use of other applications and corporate values.

3.3.2. Acceptance technology

TAM and its following extensions used models to predict technology acceptance involving three categories of factors:

- two main beliefs: perceived usefulness (U) and perceived easy of use (EOU);
- direct determinants on acceptance;
- moderating variables on acceptance.

The two main beliefs have been kept in every development of the TAM even if their weights as acceptance determinants have changed somehow.

While in the first publication of the TAM U and EOU were preceded by general "external variables" all following efforts were devoted to specify this broad category and to identify the key moderating variables or determinants.

Below are listed those mentioned in the models described in the literature review (§ 2.2.2.).

TYPE	**VARIABLE**	**AUTHOR**
eL	Age	Venkatesh *et al.* 2003
eL	Cognitive absorption	Saade' & Bahli 2005
A	Cognitive playfulness	Dunn 2004
O	Culture	Veiga *et al.* 2001
O and eL	Effort expectancy	Venkatesh *et al.* 2003

O and eL	Experience	Szajna 1996; Venkatesh & Davis 2000; Venkatesh *et al.* 2003
O	Facilitating conditions	Venkatesh *et al.* 2003
eL	Gender	Venkatesh *et al.* 2003
O	Image	Venkatesh & Davis 2000
O	Incentives	Wolski & Jackson 1999
O	Job relevance	Venkatesh & Davis 2000
eL	Learning motivation	Huang *et al.* 2005
O	Output quality	Venkatesh & Davis 2000
A	Perceived Easy of Use	Davis *et al.* 1989
O and A	Perceived Usefulness	Davis *et al.* 1989
O and eL	Performance expectancy	Venkatesh *et al.* 2003
O	Result demonstrability	Venkatesh & Davis 2000
eL	Self-efficacy	Gong & Yu 2004; Wagner & Flannery 2004
O	Social influence	Venkatesh *et al.* 2003
O and eL	Subjective norm	Venkatesh & Davis 2000
O	Training	Wolski & Jackson 1999
O and eL	Voluntariness	Venkatesh & Davis 2000; Venkatesh *et al.* 2003

Table 10: eLearning variables from TAM.

According with the TAM view, acceptance is prepared in the organisation environment and people need to be properly equipped and selected. Properties of the technological asset itself play a secondary role as long as they are communicated and correctly perceived by the organisation.

3.3.3. Learning Acceptance

Higher and distance education studies on dropout and learning acceptance identified several variables affecting them. ELearning researchers and practitioners have integrated

or added determinant factors to them. Thus, in this section there are listed variables with different research backgrounds:

- learning variables;
- eLearning variables;
- implementation variables.

In fact, it is possible to find among them general variables applicable to every learning activity (i.e. course difficulty, goal commitment …), or variables more relevant when it comes to eLearning (i.e. blended solution, eLearning design …), or elements that emerge at the implementation stage of an eLearning activity (i.e. place, time …)[3].

TYPE	**VARIABLES**	**AUTHOR**
eL	Background characteristics	Tinto 1975; Kember 1995
O	Blended solution	Oblender 2002
O	Corporate Motivation	Frankola 2001
A	Course difficulty	Rekkedal 1972
A	ELearning Design	Martinez 2003
O and eL	Expectations	Inan 2004; Frankola 2001
eL	Experience	Martinez 2003; Terry 2001
O	External system	Bajtelsmit 1988
O and eL	Goal Commitment	Tinto 1975
O	Institutional Commitment	Tinto 1975, Ely 1999
eL	Intrinsic Motivation	Kember 1995
eL	Learning styles	Diaz 2002; Martinez 2003
O	Managerial oversight	Frankola 2001; ASTD & Masie 2001
O	Marketing	ASTD & Masie 2001
O	Performance Review	ASTD & Masie 2001
O	Place	ASTD & Masie 2001

[3] Given the huge amount of eLearning experimentations many other factors could be added. A selection of important studies has been reported in this research and its variables are listed here.

O and eL	Preparation	Prendergast, 2003; Arsham 2002; Lynch 2001
eL	Private reasons	Rekkedal 1972
eL	Responsibility	Inan 2004
O	Rewards	Frankola 2001; Ely 1999
O	Social integration	Tinto 1975; Inan 2004
eL	Student skills	Rovai 2003, Ely 1999
O	Time	Rekkedal 1972; Frankola 2001; Ely 1999
eL	Voluntary Decision	ASTD & Masie 2001

Table 11: eLearning variables from learning acceptance studies.

The important role played by the context surrounding eLearning activities is confirmed by many authors, who identified relevant variables for learning and eLearning acceptance. The eLearners need to be aware of skills and efforts required by the activities while the asset has to be well designed.

3.4. The MeLA Map

The Map of eLearning Acceptance (MeLA) intends to be an explanation framework for the issue of eLearning acceptance and to synthetise the research conducted on this issue (Succi & Cantoni 2006). The phases of the process, the fundamental components and the relevant variables are represented in the scheme (Figure 21).

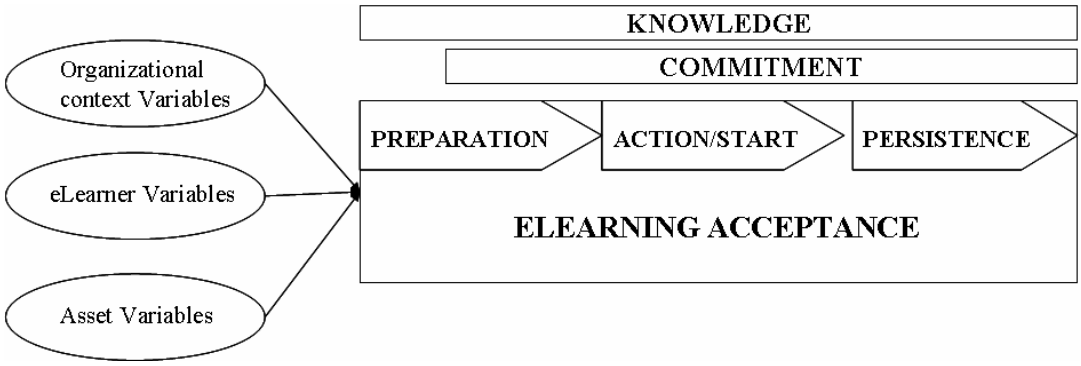


Figure 21: The Map of eLearning Acceptance (MeLA).

3.4.1. Fundamental components

The eLearning acceptance process involves two fundamental components: *knowledge* and *commitment*; they accompany the whole process and allow advances among stages. They can be assimilated to the cognitive and meta-cognitive levels that accompany every learning process.

→ Knowledge

Knowledge is formed in the preparation phase and it is constituted by every piece of information eLearners receive before starting an eLearning activity. Knowledge increases in the action and persistence phases when eLearners experience the eLearning activity. In particular there are three kinds of knowledge that eLearners can acquire:

- about the content: eLearners gain knowledge about the subject of the activity and they are expected to become more expert during the process; if, for example, they attend a course on Russian language they will get better to understand, read, write and speak in Russian;
- about the method: they also improve their understanding of the eLearning deliver modality acquiring new skills and strategies of study; in this way if they will be requested again to attend an eLearning activity, they will take less time to understand and to accomplish learning tasks;
- about the resource: these competences are related to the environment of the learning experience; during an eLearning activity eLearners interacts with some tools and with different actors (teachers, tutors and peers). So, subsequent times they use the same tools, they will be able to deal more quickly with technical problems and to exploit "tricks for a good use" developed in the past. In the same way, if they will interact with the same people they could skip the presentation procedures and remember their learning styles and attitudes.

→ Commitment

When some information is gathered by eLearners and they have built their first opinions about an activity, it begins also their involvement in it. If they are motivated and if they have the first questions about the contents, it starts their *commitment* and their "participation" to the activity.

Their commitment could be:

- to the goal: each learning activity has a didactic goal that can be completely or just partially shared by the eLearners. It can be about the acquisition of a new theoretical knowledge, a skill or an attitude.

- to the motivation: many different reasons can push participants to attend and to finish an activity. In an organisation it can be indicated as strictly compulsory, it can be created an incentive system based on learning results, or it can be given a final certificate.
- to the experience: several times a learning activity is determined by the context. ELearners can decide to start and persist in it without big aims or motivations. Sometimes people decide to attend a learning activity to enlarge their social network, or because it has been proposed from a colleague, or because they simply think the subject is interesting.

3.4.2. Phases of the process

Acceptance has been studied from the literature as a process even if in practice it is often considered as a technical event. The comprehensive definition of "acceptance" and the analysis of the phases show the complexity and the richness that subtend the phenomenon. It is not possible to declare that an eLearning activity has been accepted if one of these three components is missed: preparation, action/start and persistence.
Acceptance occurs when an eLearner is prepared, starts and persists or intends to persist in an eLearning activity.

→ Preparation

Before starting an activity or an eLearning experience, eLearners receive information about it and an invitation to attend it. Information can be requested from eLearners but often many communications achieve them even if they have not asked for it. Those messages intend to promote the activity, to motivate eLearners, to raise their curiosity, to give them access to information, to train them, to explain methods and to share goals.

Besides, eLearners receive additional inputs from informal discussions with colleagues and from their previous eLearning practices or analogous experiences. All of those communications take place every time an eLearning activity is proposed whether organisation and eLearners are aware or not and whether explicitly or not. The concept of the "learning contract" can help in further describing this phase. It is defined as the whole of actions and norms, implicit and explicit that regulates the relationship between teacher and learner in a classroom environment. Adapted to an eLearning situation and in accordance with our analysis, the learning contract can be defined as the whole of information, communications, norms and facts, which, implicitly or explicitly, precedes the beginning of the eLearning activity.

Moreover, all these practices allow aligning eLearners expectations and knowledge about the eLearning activity. As discussed in § 1.2.4., it is important to have a common ground in order to interact and to learn or use something new.

The preparation phase is where the learning contract occurs and where the "common ground" is built.

→ Action/Start

When an eLearner starts the activity s/he has already formed opinions and expectations about it. The action of entering the activity carries the decision to attend the activity and to accept the learning contract. At this point an eLearner makes experience of what he had imagined in the previous phase and s/he calibrates expectations and previous decisions. S/he has the opportunity to discover all the potential of the learning experience but also to deal with problems and limitations.

→ Persistence

A complex decisional process, in which the eLearners constantly balances costs and benefits, accompanies them to the end of the activity. Decisions are taken in accordance with their knowledge and their commitment to the activity.

On one side dropout can be caused by a mismatch between the knowledge expected and the actual experience. ELearners can dropout because they have already learned what they wanted to learn (about content), or because they had not understood the implications of the delivery method (about method), or because they can not handle technological tools and relationships with teachers or peers (about resource).

On the other side the commitment can change if personal goals of eLearners change during the process, if the motivational environment loses power or if the learning experience is judged by eLearners uninteresting, difficult or useless.

3.4.3. Relevant variables

In MeLa, three categories of variables have been identified. They are critical factors for the success of an eLearning activity and they are organized according to their main relationship with the eLearner her/himself, the asset, and the organisational context.

→ Organisational context Variables

Many actions can be done by organizations to change critical factors in order to enhance acceptance of an eLearning activity. It is possible to identify four areas of intervention:

- meaning: eLearners need to have enough reasons and motivation to attend an online activity. It is important that the organization communicates to them the relevance of the content/competence they are going to learn/acquire and the relevance to their job and to the company;

- grounding: there is a preparation phase in which their skills and their knowledge about the activity can be formed. If it is the first experience with eLearning or if they had bad previous experiences it is needed to negotiate the implications of the eLearning delivery method and to equip them properly to make the best out of the experience.
- involvement: the involvement of managers and peers can be critical to promote the eLearning activity. The support coming from the management of an organization and the effort to answer all the eLearners questions facilitate the acceptance of eLearning.
- framework: in order to create a fertile culture for eLearning acceptance, organizations can favour the creation of right conditions and can introduce explicit norms and policies regulating time, space and incentives about for online training.

→ eLearners Variables

In the higher and distance education sectors, the discussion is open about how much characteristics of learners determine learning results. They are usually referred as:

- personal characteristics: those are objective conditions about the social and economic context in which eLearners live and their educational background. Organizational and institutional efforts to modify those conditions are often useless;
- skills: these, instead, are competences on which a proper preparation and training can increase. ELearners' familiarity with technological tools and with study methods can be modified;

- attitude: learning styles and natural dispositions of eLearners can be formed in a long term period and organizations can hardly intervene on them. Nevertheless, they can be mapped and considered in the eLearning design.

→ Asset Variables

The asset of an eLearning activity can be defined as the "vehicle" through which contents and information are delivered, exchanged and shared. In particular three issues are considered:

- technology: during the delivery phase, technology is required to be easy to use, reliable, as fast as possible and manageable. Databases used to store data can be exploited also for educational purposes to track eLearners activities and or to plan them;
- course design: instructional design developed different pattern and instructional methods. They usually combine goals, activities (lessons, exercises, discussions, tests, etc.) and resources (tools, people, time, space, etc.). A discussion, for example, can take place via a forum a chat or in a classroom if a blended modality has been designed;
- content design: reading texts on a screen, creating autonomous learning modules or organizing materials are activities that have to be specifically designed for an online environment.

MeLA can be considered a starting point in understanding the phenomenon of eLearning acceptance and abandonment. Future studies could be integrated in the Map of eLearning Acceptance and contributes to the definition of a more detailed model.

3.5. A Focus on MeLA

Research questions and the vastness of the issue discussed so far, requires a further specification of the field of inquiry. In order to describe exhaustively the eLearning acceptance issue, it is necessary to start focusing on a specific part. Based on MeLA, it is further considered only a set of variables with a special regard to a given phase of the process.

In accordance with Q2 (*which is the role of the context in eLearning acceptance?*) the category of organizational context variables has been selected. Moreover, in the organizational context category it is possible to recognize many variables related to the communication issue (cfr. Q3 in § 1.3.4.).

All the variables (§ 3.3.) have been largely explained by authors and it is declared by them, or it could be inferred, which phase of the process they mostly affect. Nevertheless it is impossible to clearly distinguish among organizational context variables which affect the *preparation* phase and not the *persistence* or the *action/ start* and *viceversa*.

The preparation phase seems to be particularly relevant to the research questions but it is not possible to isolate variables affecting only it. This stage has been defined as the moment where the learning contract occurs and where the "common ground" is built (§ 3.4.2.). In both cases, communication plays a significant role and its investigation can significantly contribute to the research's goals (§ 1.3.2.).

Though, *organizational context* variables will be described and analyzed especially for what concerns the *preparation* stage.

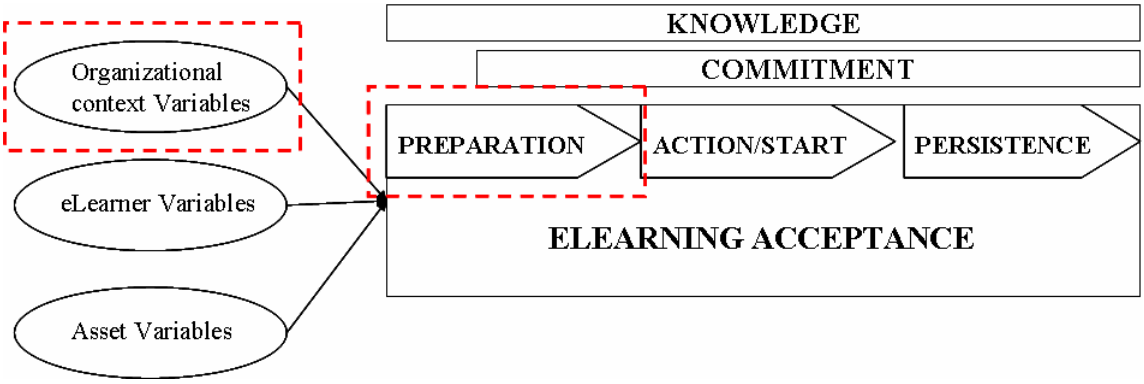


Figure 22: A focus on the eLearning Acceptance Map (MeLA).

3.5.1. A tentative list of variables

It follows a list of 40 variables that have been classified as relevant to the organizational context and those somehow are present and influence the preparation phase.

	TYPE	VARIABLE	AUTHOR
1	O	Blended solution	Oblender 2002
2	O and eL	Communication behaviour	Rogers 1995
3	O	Corporate Motivation	Frankola 2001
4	O	Culture	Veiga *et al.* 2001
5	O and eL	Dissatisfaction with the status quo	Ely 1999
6	O and eL	Effort expectancy	Venkatesh *et al.* 2003
7	O and eL	Engagement	Collis & Pals 2000
8	O and eL	Expectations	Inan (2004); Frankola 2001
9	O and eL	Experience	Szajna 1996; Venkatesh & Davis 2000; Venkatesh *et al.* 2003.
10	O	External system	Bajtelsmit (1988)
11	O	Facilitating conditions	Venkatesh *et al.* 2003
12	O and eL	Felt needs/problems	Rogers 1995
13	O and eL	Goal Commitment	Tinto 1975

14	O	Image	Venkatesh & Davis 2000
15	O	Incentives	Wolski & Jackson 1999
16	O	Institutional Commitment	Tinto 1975, Ely 1999, Collis & Pals (2000)
17	O	Job relevance	Venkatesh & Davis 2000
18	O	Managerial oversight	Frankola 2001; ASTD & Masie 2001
19	O	Marketing	ASTD & Masie 2001
20	O	Norms of the social systems	Rogers 1995
21	O	Output quality	Venkatesh & Davis 2000
22	O and eL	Peer communication	Fuller 2000; Rogers 1995
23	O and A	Perceived Compatibility	Rogers 1995
24	O and El	Perceived Complexity	Rogers 1995
25	O and A	Perceived Observability	Rogers 1995
26	O and A	Perceived Relative advantage	Rogers 1995
27	O and A	Perceived Trialability	Rogers 1995
28	O and A	Perceived Usefulness	Davis *et al.* 1989
29	O and eL	Performance expectancy	Venkatesh *et al.* 2003
30	O	Performance Review	ASTD & Masie 2001
31	O	Place	ASTD & Masie 2001
32	O and eL	Preparation	Prendergast, 2003; Arsham 2002; Lynch 2001
33	O	Result demonstrability	Venkatesh & Davis 2000
34	O	Rewards	Frankola 2001; Ely 1999
35	O	Social influence	Venkatesh *et al.* 2003
36	O	Social integration	Tinto 1975; Inan (2004)
37	O and eL	Subjective norm	Venkatesh & Davis 2000
38	O	Time	Rekkedal 1972; Frankola 2001; Ely 1999
39	O	Training	Wolski & Jackson 1999
40	O and eL	Voluntariness	Venkatesh & Davis 2000; Venkatesh *et al.* 2003

Table 12: The list of organizational context variables affecting preparation.

4. Case studies and surveys

Goal of this chapter is to explain the steps that have led to the building of the eLearning Acceptance Index. The list of variables obtained with the focus on MeLA is refined, described, assessed, divided and organized through nine case studies and two surveys (§ 4.1.).

The case studies are presented in details and criteria for companies selection, topics, relevant questions, sources of evidence and methods of analysis are specified (§ 4.2.). Results allowed the operationalization of variables and the creation of a taxonomy.

Two surveys took place in order to assess the presence and the importance of critical factors affecting eLearning Acceptance (§ 4.3.).

4.1. Steps toward an eLearning Acceptance Index

The purpose of the empirical part of the research is to identify the main factors affecting eLearning acceptance in the corporate sector and to understand the role of communication (§ 1.3.4.). It has been decided to focus only on organizational context variables with a special attention to the preparation phase.

The goal is to provide learning officers with a list of conditions, that they have to promote before offering eLearning to employees within a company. The index suggests how to equip eLearners in order to enhance acceptance and, though, to make the best out of the eLearning experience (cfr.Q2b and Q3b in § 1.3.4.).

As shown in the Map of eLearning Acceptance, there are other factors that can affect their experience such as variables related to the eLearners' conditions and skills or related to the asset's quality and reliability. Nonetheless, the eLearning Acceptance Index can represent a useful tool to drive eLearning managers' choices and to improve eLearners' satisfaction with eLearning activities.

Some case studies and two surveys have been conducted in order to define an eLearning acceptance index.

Six steps have been followed during the research to build the index (Figure 23):

- selection: important factors have been selected from the literature on the base of researcher reflections' and on their observations during explorative case studies. The research makes no strong claim to objectivity. Notion of a neutral observer not biasing the sample in this context are both unrealistic and unwanted (Lindblom and Woodhouse 1993);
- refining: through an ex-post rationalization, variables selected in the literature review have been compared with important factors emerged in the case studies in order to verify the completeness of the list;

- operationalization: all the variables have been described based on the interviews conducted with learning officers in the case studies;
- clustering: critical areas and communication's purposes have been identified and verified discussing with eLearning managers;
- assessment: a survey has been built in order to assess the presence of the variables and to verify if the list assembled by case studies was complete;
- ranking: a second survey has been delivered to a different sample to assign a value to each variable; moreover, the communication issue has been further investigated.

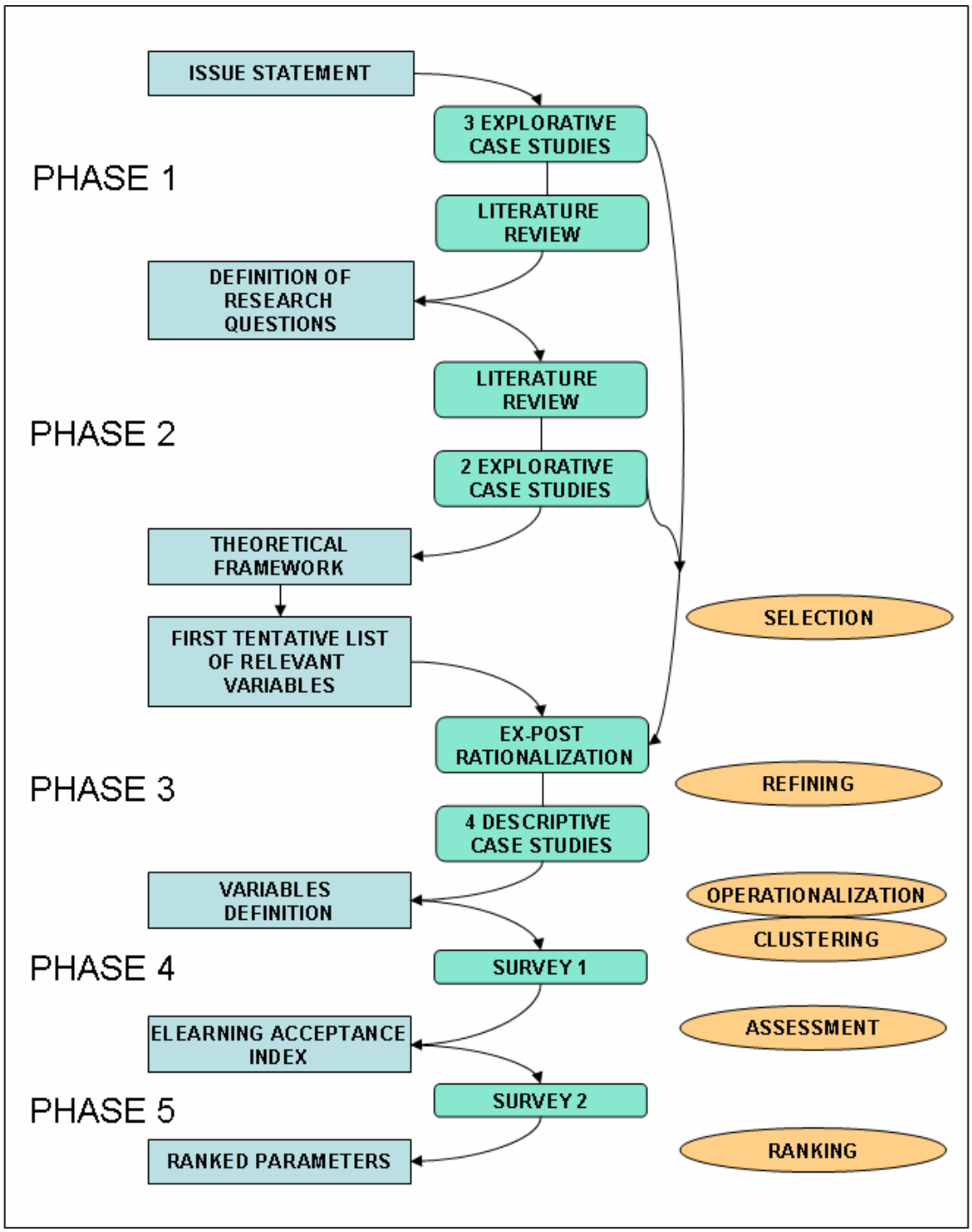


Figure 23: Steps followed during the research to build the eLearning Acceptance Index.

4.2. Case studies

Nine explorative and descriptive case studies have been conducted in different companies. In particular, criteria for companies selection, topics, sources of evidence and the conduction process will be discussed. All the organizations are briefly presented describing their business activities and focusing on learning and eLearning experiences. Results contributed to refine the first tentative list of variables, to describe them and to create a taxonomy of variables.

4.2.1. Types and functions

According to Yin (2003), the purposes of empirical studies can be divided into exploratory, descriptive, and explanatory. Explorative studies aim at seeking insight in order to find out what is happening. Descriptive studies aim at portraying an accurate profile of events, organizations, or situations. Finally, explanatory studies aim at seeking explanations of a situation or problem, typically in the form of causal relationships. However, in actual empirical studies often a mix of purposes can be observed (Yin 2003). The case studied conducted in the research had different general purposes to achieve; they belonged mainly to the types of explorative and descriptive case studies.

1. First explorative case studies were carried out in order to define the research problem and questions and to outline the research field.
2. The second set of explorative case studies intended to better understand the acceptance and communication issues in companies. An ex-post rationalization analysis allowed identifying the presence of relevant variables and factors affecting acceptance.

3. Descriptive case studies intended to verify the presence and the importance of variables and factors emerged from the literature and from exploratory case studies.

Main findings were obtained through the integration of the ex-post rationalization analysis and descriptive case studies. It was possible to compare the list of variables identified in the literature review with actual eLearning experiences in companies. The starting list of variables was mainly confirmed by case studies but some variables were merged or added (refining).

The richness of these experiences allowed to describe all the variables and to find significative indicators (operationalization); in addition, the identification of critical areas led to the creation of a taxonomy (clustering) (Figure 23).

4.2.1.1. Case study selection

For both explorative and descriptive case studies some criteria in the selection of organisations were defined, namely, they had to:

- be for-profit organizations;
- be of different size and structure;
- be located in different states;
- have a learning department devoted to train internal employees;
- have already delivered at least an eLearning course/activity;
- have collected data on participation, results and satisfaction of eLearners;
- intend to deliver a further edition of the course or an other eLearning course;
- have a commitment to a sound integration of eLearning;
- allow researchers to access documents and data;

- be willing to provide interviews with a range of managers and employees for data collection.

4.2.1.2. Data collection

Yin (2003) identifies six types of sources (S) of a case study; they have been considered in this research and are further described below. It has to be noticed that all the six sources were not collected for every case study. It happened mainly for contextual reasons, like the unavailability of resources, shortage of time offered by managers or internal corporate policies.

S1: Documentation

Three kinds of paper-based materials:

- learning materials: slides, manuals, learning contracts, information materials;
- communication: letters, emails, memoranda, agendas, announcements, intranet communications, minutes of meetings, and other written reports of events;
- administrative documents: proposal, progress reports and other internal records.

S2: Archival records

Each organisation keeps track of many data and has specific policies about their dissemination. Signing an agreement or through a verbal declaration, the anonymity of the company and the treatment of data were agreed upon. Archival records collected in the training departments were:

- platform tracking data: time, participation *ratios*, and learning results;
- survey data: learners' satisfaction and knowledge assessment;
- organisational records: charts, investment data, etc.;
- lists of names.

Some descriptive statistical analyses were carried out and mainly average, frequency, and variance were calculated.

S3: Interviews

This source appears in all the case studies conducted and it is mostly taken into consideration for the variables assessment.

Depending on the type of case study (explorative or descriptive) different interviews took place:

- top management interviews;
- HR or training management interviews;
- eLearners interviews.

In depth interviews were conducted in a one-to-one setting with a semi-structured grid of questions.

S4: Direct Observations

All the case studies included one or several site visits, which allowed direct observation of:

- environmental conditions;
- behaviours;
- practices;
- learning experiences.

S5: Participant observations

Due to the fact that some organisations opened specific accounts for researchers to access their learning platform, it was possible:

- to attend an eLearning course;

- to collaborate at the design of eLearning courses;
- to evaluate the eLearning experience.

S6: Physical Artefacts

When accounts in the learning platforms were opened, researchers had the possibility to view one or more eLearning courses; in some cases, off-line courses were provided on CD-ROMs.

In table 13, the sources of evidence, utilized in each of the case studies that will be further described in § 4.2.2., are indicated.

	Documentation	**Archival records**	**Interviews**	**Direct Observations**	**Participant Observations**	**Physical Artefacts**
Alcoa			X	X		
Alenia	X	X	X	X	X	X
Banca Intesa	X	X	X	X	X	X
Ernst & Young	X	X	X	X	X	X
Esprinet	X	X	X	X	X	X
Fiat (Isvor)	X	X	X	X	X	X
Homedepot	X	X	X	X	X	X
jetBlue	X	X	X	X	X	X
Kraft		X	X	X		

Table 13: Sources of evidence in the case studies.

4.2.1.3. Topics

Data collection aimed at building a complete picture of each company and, depending on the type of case study, at defining or investigating the research questions.

The history of the company has been studied, together with the structure and the business evolution. The whole human resources department and general learning practices have been considered in the analysis. After an observation of all eLearning activities, for each case study it was selected a single project to concentrate on.

Researchers focused on critical factors in the implementation phase of the chosen eLearning project. Strengths and weaknesses of the project were highlighted considering eLearners' satisfaction, results and the level of participation.

In relation with the type of case study, the issues of acceptance and communication were further investigated through interviews and documentation.

4.2.1.4. Case study conduction

Nine case studies have been carried in four different countries from September 2003 to February 2006. They were conducted following three different patterns (P) depending on opportunities[4] and contextual elements.

	Period	**Pattern**		
		P1	**P2**	**P3**
Alcoa	June 2005	X		
Alenia	September 2003		X	
Banca Intesa	December 2003			X
Ernst & Young	July 2005		X	
Esprinet	September 2003		X	
Fiat (Isvor)	September 2005			X

[4] Case studies were conducted mainly in the framework of the activities of the NewMinE Lab at the University of Lugano and the Masie Center.

Homedepot	January 2006	X		
jetBlue	February 2006	X		
Kraft	January 2004	X		

Table 14: Period and pattern of conduction for case studies.

P1 Short case study

Companies contacted with this modality were Alcoa in Western Australia in June 2005, Homedepot in Georgia (US) in January 2006, jetBlue in New York in February 2006 and Kraft in London (UK) in January 2004.

The site-visit pattern in those companies was the following:

- Day 1 (on site)
    - Informal conversations with the chief learning officer and/or a number of the learning staff;
    - Documentation and archival records collection (where possible);
    - Direct observations.
- Day 2 (on site)
    - Management or top management interviews.
- Day 3 (off site)
    - eLearners and employees interviews by telephone (where possible).
    - Report writing.

P2 Medium case study

The medium cases were hosted by Italian companies: Alenia and Esprinet in September 2003 and Ernst & Young Italia in July 2005.

In those companies there was the possibility to plan a longer schedule:

- Day 1 (on site)
    - Documentation collection;

    - Archival records collection;
    - Survey data collection;
    - Informal conversations with the chief learning officer and/or a number of the learning staff;
    - Direct observations.
- Day 2 - 3 - 4 (off site)
    - Documents analysis;
    - Survey data analysis;
    - Archival records analysis.
- Day 5 (on site)
    - Management and top management interviews.
- Day 6 - 7 (off site)
    - Interviews analysis.
- Day 8 (on site)
    - eLearners and employees interviews.
- Day 9 - 10 -11 -12 - 13 (off site)
    - Interviews analysis.
    - Physical artefacts view.
- Day 14 (via telephone)
    - Report discussion with the chief learning officer and/or a number of the learning staff.

P3 Long case study

Longer case studies took place in two important Italian organizations: Banca Intesa and Fiat. These case studies can be assimilated to the medium pattern (P2) for they structure but the difference is that they were inserted in longer relationships (i.e. internship and

consultant supervising activities) with the hosting companies, which allowed to enrich the case study and to observe results over time.

4.2.1.5. Case studies report

At the end of each case study a report was written and sent back to the company to have further comments and feedbacks. Each report differs from the others depending on sources available, on contextual elements and on specific requests by the companies (Appendix).

4.2.2. Presentation of companies

In this section a summarizing chart for each case study[5] is reported. The aim of those tables is to present the organization, to highlight their "learning challenges" and the role of eLearning. In order to do that a short description of the organization and a few data are provided, plus a summary of eLearning activities and an introduction to the course/project the case study was focused on. At the end of each chart are reported a couple of sentences coming from the interviews that are relevant to understand critical factors of eLearning in the organization or to underline the relevance of the acceptance issue (Bernard 2000). Data regarding the assessment of the relevant variables will be considered more in detail in the next paragraph (§ 4.2.3.).

[5] It has to be underlined that all data are referred to the situation found during the site visits to the companies (§ 4.2.1.4).

1. Alcoa – Aluminium	
Case Study Type – Period	Explorative – June 2005
Location	Kwinana – Western Australia
Employees	131.000 c.a.
Foundation	1870
First eLearning project	1995
Short description	Alcoa is the world's leading producer of primary aluminum, fabricated aluminum, and alumina and it is active in all major aspects of the industry. Alcoa serves the aerospace, automotive, packaging, building and construction, commercial transportation, and industrial markets. The company counts 131,000 employees in 43 countries. There are three locations in WA with more than 2.000 employees. The Refinery in Kwinana counts on 1.000 employees and is specialized in Aluminia processes.
eLearning experience	In 1995 they introduced an LMS called Traxes to manage learning activities. This tool mapped employees' learning profiles since they were taken and followed their steps along the whole career. It consolidated the enterprise systematical approach and contributed to the rethinking of knowledge processes. In 2005 they had 5.500 eLearning activities (bigger than learning objects) available on the platforms and created blended learning paths for employees mixing online activities and face-to-face sessions. Pure distance eLearning activities represented the 15% of the whole. In 2003 a new platform of Oracle has been introduced at worldwide level. At the moment few programs run on it but it is going to become the main tool in few years.
Distinctive observations	"Starting to promote an initiative from the top it's a good strategy to succeed". "Employees consider eLearning as a 'necessary evil' even if they are perfectly aware of the rationale".

2. Alenia Aeronautica	
Case Study Type – Period	Explorative – September 2003
Location	Napoli – Italy
Employees	9.000 c.a.
Foundation	1912
First eLearning project	2002
Short description	Alenia Aeronautica is one of the most important Italian aeronautic companies and belongs to the Finmeccanica Group. Activities range from the design to the development of aircrafts and aeronautic systems for both military and civil contexts. For military purposes Alenia creates aircrafts, directly or through international collaborations, like Eurofighter Typhoon, l'Amx, Tornado, C-27J, G222, ATR42MP and Surveyor.
eLearning experience	First online courses were proposed in Alenia as an experiment to 100 employees. They were Global English, a widespread online course of English, and Best, a basic course about corporate organization addressed to new hired people. Discussion and evaluation groups were created to assess the experience and understand advantages or disadvantages of the new modality and to decide future steps of the company with eLearning.
Distinctive observations	"We sent an email to present the course with login and password". "The dropout issue was high because people didn't understand at the beginning that they had to attend the class also on Sundays".

3. Banca Intesa	
Case Study Type – Period	Explorative – December 2003
Location	Vicenza – Italy
Employees	70.000 c.a.
Foundation	1998
First eLearning project	1998
Short description	Banca Intesa is one of the largest Italian bank group and one of the most important in the European financial market. It is born in 1998 by the merging of Cariplo and Ambroveneto banks. In 1999 also Banca Commerciale italiana (Comit) joined them. The group counts nearly 70.000 employees and 4.500 agencies in Italy and abroad. The first migration of Cariplo took place in April 2001 with a "big bang" modality. It meant that procedures and operative systems were changed in all the agencies in the same moment and that 10.000 people changed their job modalities. In order to avoid many organizational problems encountered in the first experience, the whole process, during the second incorporation in October 2003, was segmented in 5 geographical sectors. Learning activities anticipated and accompanied the two migrations.
eLearning experience	The learning technology and methodology department in 2001 developed a platform in collaboration with Getronics called Intesa Campus. It was designed to manage classroom and online activities. ELearning is chosen as learning modality in Banca Intesa when at least one of the following conditions occurs: wide audience, shortage of delivery time, stability of contents. In 2003 it has been delivered 40.035 learning hours online. The migrations' learning processes were strongly supported by eLearning activities and blended solutions. In particular, a five hours course called "Lo sportello" was offered to all front-desk employees during the second merge.
Distinctive aspects	"The third bank had a very different culture: vertical, hierarchical and formal". "The real added value was to involve managers knowing very well the population and that could address properly communications and learning activities".

4. Ernst & Young – Italia	
Case Study Type – Period	Descriptive – July 2005
Location	Milano – Italy
Employees	100.000 c.a.
Foundation	1906
First eLearning project	1999
Short description	Ernst & Young (EY) is an international company operating in the area of professional services to the corporate sector. EY is one of the leader in audit services, transaction advisory services, financial and legal consultancy. It operates at a global level with over 100.000 employees and a network of 670 locations in 140 different countries. In Italy its integrated offer of professional services is diffused on the territory with 16 offices and over 2.200 employees, among them about 190 are partners.
eLearning experience	EY Learning Connection (EYLC) is the global platform of EY managing learning activities whether online or class-based. Over 589 SkillSoft courses are offered and three were created or bought *ad hoc* for the Italian group. One of them is an English course online called English Town. The program started in June 2003 with a pilot phase of three months involving 60 people. Data about students' satisfaction and learning results were considered to decide the first official edition of the course that started in April 2005.
Distinctive aspects	"There are many corporate goals about the English competency and bonuses are based on their achievement". "Employees have difficulties in creating their own study plan".

5. Esprinet	
Case Study Type – Period	Explorative – September 2003
Location	Nova Milanese, MI – Italy
Employees	500 c.a.
Foundation	1995
First eLearning project	2002
Short description	Esprinet is one of the most important Italian operators on the IT products (hardware and software) distribution market. Since 1996, when the first website was created and the first extra-net planned, internet has increased significantly as working tool; in Esprinet more than 74,4% of orders come through the portal. The commercial structure of Esprinet faces a segmented market composed by over 23.000 dealers.
eLearning experience	In 2002 an important learning program called ESC was launched: English Speaking Company. The main goals were to reduce linguistic barriers and to develop relationships with international partners. Many learning activities were planned (classes, games, an English speaking tutor …) among them, eLearning was tried.
Distinctive aspects	"ELearning was suitable to our internal culture: it is task-oriented, grounded on responsibility and on achievement of personal goals". "We had a communication plan and it will be more relevant in future projects".

6. Fiat – Isvor	
Case Study Type – Period	Descriptive – September 2005
Location	Torino – Italy
Employees	110.000 c.a.
Foundation	1899
First eLearning project	1996
Short description	Isvor Fiat is the corporate university of the historical Italian Fiat Group. The group's activities were initially focused on the industrial production of cars, industrial and agricultural vehicles. Over time it has diversified into many other fields, and the group now has activities in a wide range of sectors in industry and financial services. It is Italy's largest industrial concern. It also has significant worldwide operations, operating in 61 countries with 1,063 companies, which employ over 223,000 people, 111,000 of whom are outside Italy. The mission of Isvor Fiat is to support and disseminate strategies of the Fiat Group as well as to guarantee individual and collective learning (Succi & Cantoni 2006a).
eLearning experience	Since 2001 eLearning accompanies the launch and the restyle of each Fiat Car model. Online modules delivered through the platform complete the face-to-face lessons or test drive sessions for vendors. In May 2005 Fiat Car decided to anticipate the launch of a new car called Grande Punto. It was planned by October and Isvor was asked to train the 2.500 Italian vendors within September 2005. Because of time and cost constrain, it was decided for the first time to design a learning program completely at distance. The learning path was articulated in 5 didactical units. They were proposed in different moments with different technologies and modalities. Vendors could attend activities or log into the platform or use CD-ROMs and printed materials sent them via mail. A final test and intermediate assessment moments were planned in the program.
Distinctive aspects	"It was necessary to share organizational goals to make eLearning accepted". "Tutors contacted each participant at the beginning and during the program".

7. The Homedepot	
Case Study Type - Period	Descriptive – January 2006
Location	Atlanta, GA – US
Employees	350.000 c.a.
Foundation	1979
First eLearning project	1996
Short description	Homedepot is one of the world's largest retailers in the market segment of home improvement construction and building maintenance. It operates more than 2,000 stores such as The Home Depot, EXPO Design Center, The Home Depot Supply and other subsidiary companies across North America. The company counts more than 350.000 employees scattered among over 200 locations in the United States, Canada, Caribbean Islands and Mexico. The personnel suffer an important turn-over of 40% even if it is lower than others retailers on the market. In the headquarters in Atlanta work more than 5.000 people and there are other few offices around US (Succi 2006).
eLearning experience	The eLearning team developed a curriculum with over 105 fully online courses for employees in stores. On average courses last one hour but they can range from 15 minutes to 4 hours. In 2005 they achieved 4.000.000 completions of courses. The 25% of the curricular learning is done through eLearning especially during the first year. In each store there is a training room where computers for eLearning are in place.
Distinctive aspects	"We had online courses before having an email address system". "We were pioneer in this sector because we took care of the quality of online courses". "ELearning was very well accepted from the stores in comparison with what they had before: nothing".

8. jetBlue Airways	
Case Study Type – Period	Descriptive – February 2006
Location	Forest Hills, NY – US
Employees	10.000 c.a.
Foundation	2000
First eLearning project	2003
Short description	JetBlue is a young airways company remarkable for its rapid growth in the US airways market. JetBlue serves 33 cities in the U.S., the Dominican Republic, Puerto Rico and the Bahamas and operates more than 340 flights a day. The addition of a new aircraft to their fleet (E190) confirms their mission in offering experience of low fares and inflight amenities like the entertainment onboard. During the expansion phase the HR department hires almost 9-10 people per day and this process is planned to continue till 2011. Learning activities are managed by the corporate university that is divided in 5 colleges: customer services, in-flight, flight, technical operations and reservations.
eLearning experience	Jet Blue University adopted a portal in 2004 to manage online courses, classroom enrollment, classroom schedules and pre-class work materials. In each airport are being created specific areas where crew members can attend online courses. On the portal are delivered, tracked and assessed almost 30 online courses. Online courses cover different subjects from the safety issues to just-in-time learning (i.e. how to deal with a snow storm). Most of the courses are mandatory and imposed from the Federation of American Aviation, which regularly checks crew learning results.
Distinctive aspects	"Posters and regular newsletters inform the crew about courses online". "To increase acceptance it's important to set the proper environment". "Crew members soon will accept eLearning as an embedded every day activity".

9. Kraft – UK	
Case Study Type – Period	Explorative – January 2004
Location	London – United Kingdom
Employees	100.000 c.a.
Foundation	1903
First eLearning project	2002
Short description	Kraft is the largest branded food and beverage company in North America and the second largest in the world. Kraft Foods markets food and beverage brands in five product sectors: snacks, beverages, cheese and dairy, grocery and convenient meals. Kraft globally is present in 60 countries and counts almost 100.000 employees. The company is divided in Kraft North America and Kraft International to which Kraft Europe belongs. Those areas have been managed independently for a long time but in 2004 began a unifying process to create a global company.
eLearning experience	Learning activities and new technologies in the last six years developed autonomously and many scattered eLearning projects were born. In November 2003 started a global project that tried to map all the eLearning experiences in the company at a world level and to propose a future global plan for the company. In the last years Kraft UK introduced 33 online courses in their training plan. They bought online courses from "Learning 4 Business", which were delivered through a basic platform they developed internally. Those courses are always available to the 2.000 employees and they released over 1.000 certificates to the employees who completed the course.
Distinctive aspects	"We need eLearning to become global". "Employees react differently to eLearning according to their position and department".

Table 15: Presentation charts of case studies.

4.2.3 Results

As mentioned before, it is not possible to publish specific data about eLearning activities. It was negotiated with companies to present only aggregated results highlighting “good practices” and providing anonymous example to enrich variables’ description and operationalization.

4.2.3.1. Explorative case studies

The first three explorative case studies were conducted in the first phase of the research together with the literature review. They helped to circumscribe the research focus, to identify eLearning critical factors and to define the research questions. Through documents, data and interviews to eLearning managers and eLearners, many barriers and enablers to eLearning were identified. Among them, the acceptance issue resulted of particular interest to eLearning managers. Besides, a comparison between the answers of eLearners and those of managers revealed many misunderstandings at communication level. Even if interviews to eLearners enriched the study, it was decided to consider only the point of view of eLearning responsible in the subsequent case studies. Managers revealed to be aware of more contextual factors involved in the integration of eLearning processes and showed anyway a deep understanding of eLearners’ situations.

Moreover, it was decided to concentrate on eLearning experiences delivered only to internal employees in order to reduce the complexity of the analysis.

The ex-post rationalization of these experiences and of the other explorative case studies were joined to the results of descriptive ones; they led to the refining of the list of variables, to the operationalization and to the taxonomy which are presented below.

4.2.3.1. Refining

The list of variables obtained by the focus on the Map of eLearning Acceptance (§ 3.5.) has been further refined through case studies. Analysing the declarations made by eLearning managers in the interviews and through data, coming out by direct observation or documents, it was possible to extract relevant (positive or negative) factors that affect eLearning experiences and to compare them with the first tentative list of variables presented in § 3.5.1. For each variable it has been assigned a value about the significance of the variable in each of the nine case studies that ranges from - - to + +. The symbol is assigned considering the relevance of the issue based on interviews, documents, direct observations and archival records (Glaser and Strauss 1967). For explorative case studies, they were inferred ex-post by researchers. For the parameters about which was not possible to reconstruct managers' opinions or to retrieve useful data, N.A. was reported. In table 16, only positive values, without any reference to specific companies, are reported.

	EXPLORATIVE CASE STUDIES					**DESCRIPTIVE CASE STUDIES**			
VARIABLE	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**
Blended solution		++		++					
Communication behaviour							++	++	
Corporate Motivation				+	+			+	
Culture					++				
Dissatisfaction with the status quo								++	+
Effort expectancy	+						++		
Engagement				+			+		
Expectations	++					++			
Experience			++	+					
External system								++	+
Facilitating conditions			+	++					++
Felt needs/problems				++				++	
Goal Commitment	++				+	++			

Image	+						+		
Incentives						++	+		
Institutional Commitment		+		++					
Job relevance	+				++	+			
Managerial oversight			++			+			+
Marketing			+				+		
Norms of the social systems		++						+	
Output qualità				+		++			
Peer Communication		++							++
Perceived Compatibilità					+			++	
Perceived Complexity	+						++		
Perceived Observability	++		+						
Perceived Relative advantage					++			++	
Perceived Trialability		+		++					
Perceived Usefulness						++			+
Performance expectancy	++								
Performance Review		++	+						
Place								++	++
Preparation				++			+		
Result demonstrability		++	++						
Rewards						+	++		
Social influence	++					+			
Social integration				+				++	
Subjective norm					++		+		
Time	++		+			++			
Training		+	+	+					
Voluntariness	+	++	++			+			
Support	++				++		++		
Target choice	++		++			++			

Table 16: Variables' relevance to case studies.

All the variables resulted relevant at different levels to the companies. The purpose of this procedure was not to rank variables in order of importance (§ 4.1.) but to verify both the relevance and the completeness of the initial list. Based on this comparison among

variables and critical factors emerged from case studies, two new variables have been added.

- *Support*: support services (i.e. tutoring, mentoring, help desks …) provided to eLearners resulted to be very effective in engaging and leading students in the preparation phase. On the other side, when difficulties occurred a lack of support has always been diagnosed by eLearning managers.
- *Target choice*: the selection of audiences to address eLearning activities to emerged to be a very important factor. It confirms the declaration of Elliott Masie that "infusion technique" rather than a revolutionary model could enhance eLearning acceptance.

  "*By starting where people and the organization are most ready for change, eLearning can gain wide spread familiarity and acceptance*" (Masie 2002).

Taking into account the three categories of variables of MeLA (§ 3.4.), several other variables emerged from case studies to be added to the *asset* and *eLearner* categories. Future developments of the research could take them into consideration for the improvement of the general map (Figure 21).

4.2.3.2. Operationalization

Considering the goal of providing eLearning managers with a set of guidelines to enhance eLearning acceptance, a "translation" of variables into practice is needed.
In order to do this, three activities have been done:

- description: in accordance with authors' presentation and experiences collected through case studies, a description of the variable is given;

- indicator selected: a specific condition to be verified is chosen; a shift to the normative level is done in order to offer to managers some operative guidelines;
- example: a concrete example taken from the nine case studies is provided to enrich variables' description.

This information is collected in table 17 and it follows an alphabetical order.

1 Blended solution	
Author	Oblender 2002
Description	The mix of learning solutions encourages eLearners with different learning styles and different learning experiences.
Indicator selected	Existence of activities in presence.
Example	A face to face meeting in the middle of the eLearning course is scheduled.

2 Communication Behaviour	
Author	Rogers 1995
Description	Communication channels are used to promote eLearning activities among eLearners.
Indicator selected	The awareness of the learning department in the use of communication channels.
Example	There is a communication plan for each eLearning activity.

3 Corporate Motivation	
Author	Frankola 2001
Description	The level of motivation of the organization in supporting eLearners' efforts.
Indicator selected	The declaration from the learning department about the corporate motivation.
Example	ELearning is mentioned in the corporate newsletter.

4 Culture	
Author	Veiga *et al.* 2001
Description	ELearning acceptance is influenced by specific cultural beliefs or tradition of a company.
Indicator selected	The presence of declared cultural enablers or impediments.
Example	Employees are used to receiving any important piece of information via the computer.

5 Dissatisfaction with the status quo	
Author	Ely 1999
Description	The level of dissatisfaction with the current situation influences eLearners opinions about eLearning.
Indicator selected	Declaration from the learning department about eLearners perceptions.
Example	Before eLearning there were some good handbooks available in the library on a given subject.

6 Effort expectancy	
Author	Venkatesh *et al.* 2003
Description	ELearning activities do not seem to require too much time and energy.
Indicator selected	Effort of the learning department in explaining course requirements.
Example	Ex-alumni are available to be interviewed about their online experiences.

7 Engagement	
Author	Collis and Pals 2000
Description	ELearners are triggered and offered good reasons to attend eLearning activities.

Indicator selected	The learning department considers eLearners' motivation before offering eLearning courses.
Example	ELearners receive a special "kit" before starting eLearning activities.

8 Expectations	
Author	Inan (2004); Frankola 2001
Description	Expectations influence the level of acceptance of an eLearning activity.
Indicator selected	The awareness of the learning department of the importance of expectations in an eLearning activity.
Example	ELearners are asked about their expectations before the eLearning experience starts.

9 Experience	
Author	Szajna 1996; Venkatesh and Davis 2000; Venkatesh *et al.* 2003.
Description	Previous experience of eLearners with eLearning courses affects their preparation for the next eLearning experience.
Indicator selected	The learning department keeps tracks of previous eLearning experiences of eLearners.
Example	There is a track of the personal learning paths of eLearners.

10 External system	
Author	Bajtelsmit (1988)
Description	The external environment influence eLearners experiences.
Indicator selected	Awareness of the learning department in considering this factor.
Example	A benchmark document has been produced.

11 Facilitating conditions	
Author	Venkatesh *et al.* 2003

Description	The physical environment facilitates eLearning activities.
Indicator selected	The effort of the learning department in creating facilitating conditions.
Example	The training room is closed to the cafeteria.

12 Felt needs/problems	
Author	Rogers (1995)
Description	ELearning activities can meet needs and problems felt by the eLearners.
Indicator selected	ELearning solves some problems present in the organization or answers to specific learning needs that could not find a different modality.
Example	The nature of the learning project requires to train thousands of employees in the same week.

13 Goal Commitment	
Author	Tinto 1975
Description	Learners know and understand goals of the organization.
Indicator selected	Effort of the learning department in communicating the eLearning activities' goals.
Example	The improvement of a skill for an eLearner is an important goal for her/himself.

14 Image	
Author	Venkatesh and Davis 2000
Description	The audience of eLearning activities create an image of the eLearning modality within the organization.
Indicator selected	Target range.
Example	eLearning courses are addressed to every role in the organization.

15 Incentives	
Author	Wolski and Jackson 1999
Description	Learning departments associate incentive systems to eLearning activities.
Indicator selected	The presence of any incentives.
Example	ELearners win a mug each time they finish a course.

16 Institutional Commitment	
Author	Tinto 1975, Ely 1999
Description	ELearners are committed with institutional goals.
Indicator selected	Declarations of top-managers about eLearning at an institutional level.
Example	The presentation of the company is done through an online course.

17 Job relevance	
Author	Venkatesh and Davis 2000
Description	ELearning activities are perceived as strongly related to job activities.
Indicator selected	Effort of the learning department in showing the correlation between eLearning and job activities.
Example	An English online course is proposed because it is necessary to speak with international suppliers.

18 Managerial oversight	
Author	Frankola 2001; ASTD and Masie 2001
Description	The involvement of the management helps the learning department in promoting eLearning activities.
Indicator selected	The presence of any form of participation of management or top management.

Example	A videoconference with the CEO launches the eLearning program.

19 Marketing	
Author	ASTD & Masie 2001
Description	The effective participation of eLearners is enhanced by internal sponsoring activities.
Indicator selected	The presence of marketing plans and tools.
Example	Gadgets connected to the eLearning course are distributed at the beginning of the course.

20 Norms of the Social System	
Author	Rogers (1995)
Description	Specific norms are created to facilitate the introduction of eLearning as a learning modality.
Indicator selected	The presence of norms facilitating eLearning activities.
Example	Discussion sessions with peers about learning results and questions are scheduled every two weeks.

21 Output quality	
Author	Venkatesh and Davis 2000
Description	ELearners perceive a quality output on their job from eLearning activities.
Indicator selected	Effort of the learning department in showing the output quality.
Example	ELearners achieve an international certificate for a foreign language.

22 Peer communication	
Author	Fuller 2000; Rogers 1995
Description	The creation of peer communication channels helps eLearners in

	understanding eLearning activities.
Indicator selected	Presence of official peer-to-peer communication tools.
Example	In each location there is an internal champion who takes care of eLearning activities.

23 Perceived Compatibility	
Author	Rogers (1995)
Description	All organization's processes, practices and values can be perceived by eLearners as compatible with the eLearning process.
Indicator selected	There are evident signs of incompatibility.
Example	The eLearning system is integrated in the corporate intranet.

24 Perceived Complexity	
Author	Rogers (1995)
Description	ELearning activities do not seem to require new complex skills for eLearners.
Indicator selected	ELearners are informed and prepared about required skills.
Example	Steps to access eLearning activities are communicated.

25 Perceived Observability	
Author	Rogers (1995)
Description	ELearning activities are observable by eLearners.
Indicator selected	Possibility for eLearners to access the course before starting the activities.
Example	There is a pre-course meeting where tools and activities are presented.

26 Perceived Relative Advantage	
Author	Rogers (1995)

Description	ELearners can compare eLearning as an effective and efficient solution with previous training solutions.
Indicator selected	The learning department promotes the awareness of the relative advantage of eLearning.
Example	The cost effectiveness of eLearning increases the number of learning activities in the organizations.

27 Perceived Trialability	
Author	Rogers (1995)
Description	ELearning tools can be tried by eLearners.
Indicator selected	Possibility for eLearners to access the course before starting the activities.
Example	There is a pre-course meeting where tools and activities are presented.

28 **Perceived Usefulness**	
Author	Davis *et al.* 1989
Description	The perception of eLearners of the usefulness of eLearning activities affects their acceptance.
Indicator selected	The effort of the learning department in showing the benefits of eLearning.
Example	Expected job performance improvements are communicated.

29 Performance expectancy	
Author	Venkatesh *et al.* 2003
Description	ELearning activities do not seem to require new complex skills for eLearners (cfr. 3).
Indicator selected	The presence of support for eLearners where eLearning activities require skills not already acquired by eLearners.
Example	An help desk is guaranteed during the course.

30 Performance Review	
Author	ASTD & Masie 2001
Description	The perception of being monitored enhances the intention of finishing the eLearning course.
Indicator selected	Presence of any declaration of performance review.
Example	At the end of the month a report is sent to eLearners.

31 Place	
Author	ASTD & Masie 2001
Description	The creation of the correct physical conditions helps eLearners in attending an eLearning activity.
Indicator selected	Presence of policies regarding the space issue.
Example	A training room is created in each location of the organization.

32 Preparation	
Author	Prendergast, 2003; Arsham 2002; Lynch 2001; ASTD and Masie 2001
Description	ELearners are prepared and introduced to eLearning activities.
Indicator selected	Presence of any preparation session or moment.
Example	An introductory session in presence is scheduled at the beginning of eLearning activities.

33 Result demonstrability	
Author	Venkatesh and Davis 2000
Description	ELearners perceive they can demonstrate results once they finish the course.
Indicator selected	Effort of the learning department in showing the result demonstrability.
Example	At the end of the activity eLearners will be able to analyse a different balance.

34 Rewards	
Author	Frankola 2001; Ely 1999
Description	Forms of reward encourage eLearners in the intention of finishing the course.
Indicator selected	Presence of a reward system
Example	There is a bonus of 50$ for any course completion.

35 Social influence	
Author	Venkatesh *et al.* 2003
Description	The influence of peers affects opinions and expectations about eLearning.
Indicator selected	The awareness of the learning department about social influence.
Example	ELearners' results are public.

36 Social integration	
Author	Tinto 1975; Inan (2004)
Description	ELearners experiment a social environment as in a classroom context. Social integration affects eLearning acceptance.
Indicator selected	The presence of collaborative activities in eLearning activities.
Example	It is possible to collaborate in presence or online with other peers attending the same course.

37 Subjective norm	
Author	Venkatesh and Davis 2000
Description	The opinion and involvement of supervisors influence eLearner decisions.
Indicator selected	The degree of involvement of the management.
Example	Managers are supposed to spend two minutes per week discussing eLearning results with eLearners.

38 Support	
Author	Prendergast (2003)
Description	The creation of a support system encourages eLearners in starting an eLearning activity.
Indicator selected	The presence of support structures or tools.
Example	A group of tutors assist eLearners during working hours.

39 Target choice	
Author	Masie 2002
Description	ELearning activities can be addressed to a specific or a generic public. Uncertainty regarding the target choice affects eLearning acceptance.
Indicator selected	A rationale to select the target each time.
Example	A course is offered only to administrative employees.

40 Time	
Author	Rekkedal 1972; Frankola 2001; Ely 1999
Description	Time available could help eLearners in following their learning path.
Indicator selected	Presence of any policy regarding the time issue.
Example	Time slots are allocated every week for eLearning activities.

41 Training	
Author	Wolski and Jackson 1999
Description	Different skills to become an eLearner can be taught.
Indicator selected	Effort of the learning department in teaching required skills for an eLearning activity.
Example	Independent study method tips are provided to eLearners.

42 Voluntariness	
Author	Venkatesh and Davis 2000; Venkatesh *et al.* 2003; ASTD and

	Masie 2001;
Description	The level of voluntariness influences eLearners perception of an eLearning activity and their study organization.
Indicator selected	Specification of the level of voluntariness.
Example	Course participation is tracked and assessed.

Table 17: Variables description and operationalization.

4.2.3.3. Clustering

Many similarities and relationships among variables have been identified through case studies. Moreover, it was observed that variables have different scopes of action and that a hierarchy can be outlined.

Hereafter, variables are aggregated according to two criteria. On one side there are the two components of the Map of eLearning Acceptance, knowledge and commitment, and on the other side one can distinguish between two different levels: micro and meso. In fact, an organization can promote knowledge and commitment to eLearning considering it as a personal experience (*micro*) and/or as a corporate initiative (*meso*).

Four clusters of variables were created, which are presented below with a tree structure highlighting the order and interactions among them.

	Micro-level	**Meso-level**
Commitment	Meaning	Involvement
Knowledge	Information	Framework

Table 18: Four clusters of variables.

→ MEANING – *Commitment to eLearning at a micro-level*

This category includes the variables related to the meaning of proposed eLearning activities. The company has to provide "good reasons" to eLearners in order to make

them accept it. First of all, they have to perceive the usefulness of the eLearning activity and to foresee results for their job and career. Further, eLearning needs to prove its added value also in comparison with previous or other learning practices. ELearners have to be motivated both toward the goal of the eLearning activity and, when different, to the goals that the organization pursues through it.

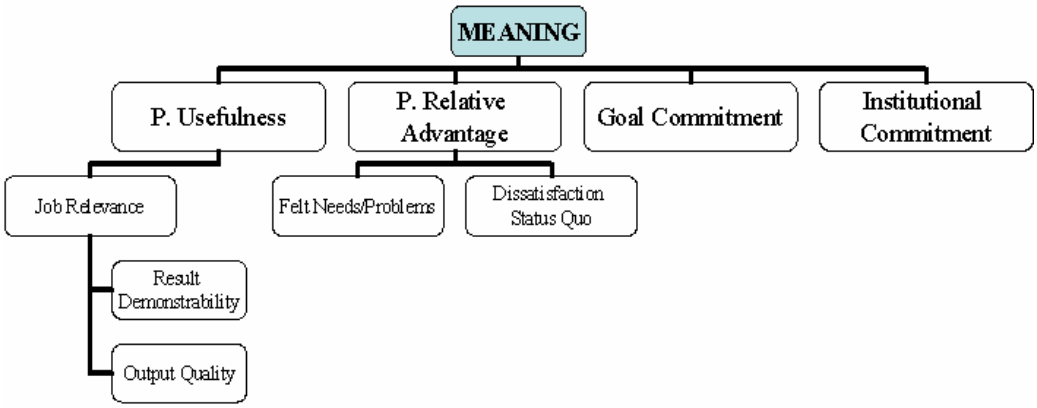


Figure 24: The *meaning* category in the taxonomy of variables.

→ INFORMATION – *Knowledge of eLearning at a micro-level*

ELearners have the right to be informed about eLearning activities. When they face a new learning modality they might have wrong expectations based on similar precedent bad experiences or on reported judgments. It is important to provide preparation on new skills, new learning methods, different time management strategies implied by eLearning activities. Moreover, the possibility to try and to be trained about resources available and about the use of technological tools might encourage eLearners in accepting eLearning activities.

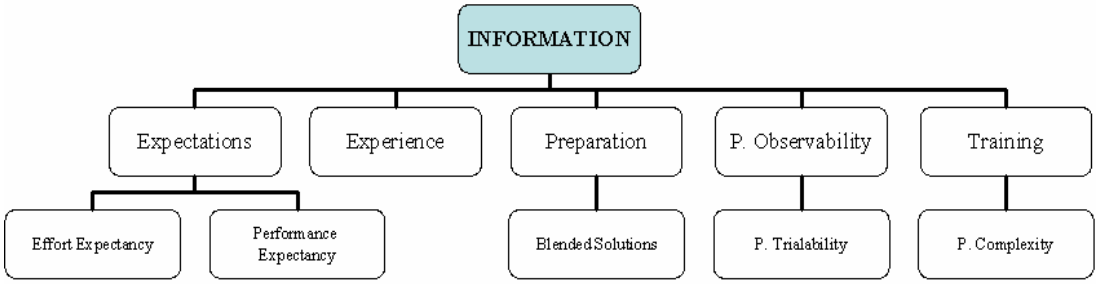


Figure 25: The *information* category in the taxonomy of variables.

→ INVOLVEMENT – *Commitment to eLearning at a meso-level*

The level of involvement of both eLearners and eLearning managers to eLearning activities strongly affects their acceptance. The learning culture of the organization needs to be able to include eLearning activities in its practices and values. Communication is extremely relevant to promote eLearning activities using different channels and strategies. In addition, the commitment of the top management facilitates and motivates the access to eLearning activities.

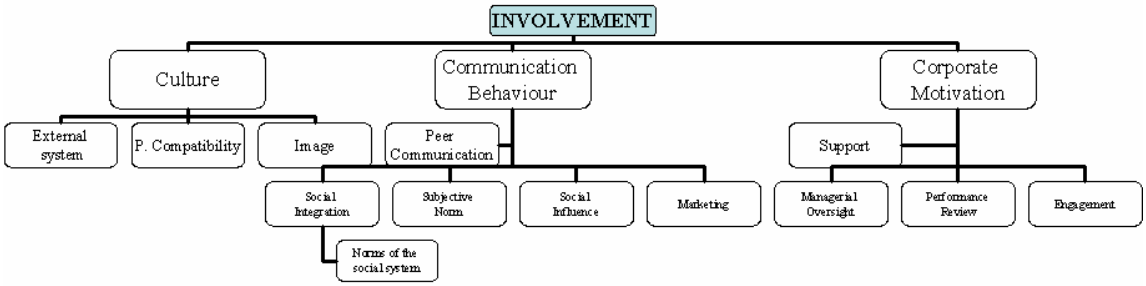


Figure 26: The *involvement* category in the taxonomy of variables.

→ FRAMEWORK – *Knowledge of eLearning at a meso-level*

The organizational environment can favour the acceptance of eLearning. In particular, policies and norms can be introduced to facilitate eLearning experiences. The existence of a system of incentives and rewards can support an eLearning program. The degree to which the activity is compulsory or voluntary has to be specified by the learning department. Moreover, time windows and dedicated spaces need to be clearly devoted only to eLearning activities.

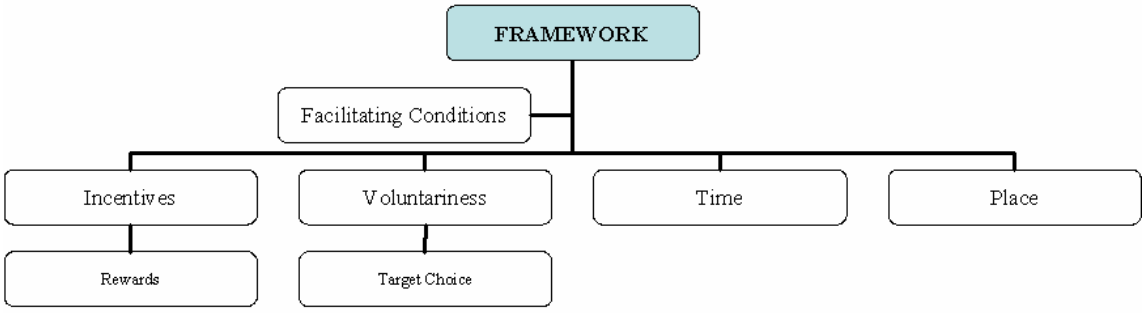


Figure 27: The *framework* category in the taxonomy of variables.

4.3. Surveys

In this paragraph two surveys will be presented, which have been delivered to assess variables' presence and importance in companies. Different samples, questions, tools and delivery methods will be described for both experiences. Main results are discussed in the following sections.

4.3.1. First Survey - Assessment

The first survey was designed in collaboration with the Masie Center at Saratoga Springs, NY. It was delivered to the Learning Consortium in December 2005. The 42% of questionnaires has been collected and results contributed also to the creation of the second survey.

4.3.1.1. The Learning Consortium

The Learning Consortium is a professional network founded by Elliott Masie in 1997. It counts more than 200 members and most of them are among *Fortune 500* companies. Consortium companies come from many different fields (business services, manufacturing, petrochemicals, food and beverage, government, etc.). Basically, it is possible to distinguish between suppliers and implementers of eLearning solutions, plus a dozen of companies that can be defined as both.

Demographic data (Figure 28) show the scale of the organizations and the number of people trained by them.

N° of employees	**Members**
1-500	16%
501-1,000	3%
1,001-10,000	22%

10,001-50,000	30%
50,001-100,000	12%
100,001-500,000	15%
500,001-1,000,000	0
1,000,000+	2%

Figure 28: Numbers of employees trained by the Learning Consortium members (Source: Learning Consortium snapshot as of the 30th November 2005).

A large number of members provide training for internal employees while a smaller number offers learning activities also for other companies' employees (e.g., clients, re-sellers, partners and others). It is possible to estimate that the Learning Consortium reaches 10/15 million people in the global workforce and the location of their learners (Figure 29).

Location	Members
Globally	62%
Nationally (whether within the U.S. or other single nation)	35%
Regionally (such as the European Union, Latin America or other region)	3%

Figure 29: Geographical distribution of employees trained by the Learning Consortium (Source: Learning Consortium snapshot as of the 30th November 2005).

To join this community of practice, companies are supposed to pay an annual fee and to respect an ethical code that enlist members to participate in on-going benchmarking, networking, and dialogues and to refrain from selling products to other members.

Main activities conducted in the Learning Consortium are benchmarking and collaboration activities among members. There are monthly online meetings and some site events organized by the Masie Center; a newsletter is regularly sent to members,

which presents sector updates, research reports and reading suggestions. Each company of the Consortium has a primary contact person in charge of maintaining their membership. They usually are directors and managers (80%) in the learning department but there is also a good number of senior and executives managers (20%).

Figure 30: The learning Consortium's logo.

4.3.1.2. Delivery of the survey

The survey was implemented online with a tool called Ultimate Survey. Before launching the questionnaire, it was sent to three members for a pilot test. They were asked to provide a feedback about the usability of the tool, the understanding of the questions, the interest to the topic - considering the sample - and the time required for its completion.

The link automatically generated by the software was sent via email to the Consortium's primary contacts. The email was sent the 29th of November 2005 and it was asked to have the questionnaire back by the 5th of December. A reminder has been sent on the 5th of December. It has been promised to compilers that any reporting of results would have been kept anonymous and confidential, without reference to specific organizations. It was also asked them to include voluntary the name and the email address for a possible follow-up of the research.

The survey was sent only to companies that were actually implementing eLearning activities and to three examples of suppliers with interesting learning applications. Due to the research topic, it has been chosen companies with business related to the costumer

(B2C) instead of business company that sell their product without communicate with costumers (B2B). So, the following final list of 144 companies was obtained.

3M	Kimberly-Clark Corporation
Accenture	Kohler Company
Allstate Insurance Company	KPMG LLP
American Express	Kraft Foods
American Family Mutual Insurance Co.	Marriott International
Apple Computer, Inc.	Marsh & McLennan
Armstrong World Industries	MassMutual Financial Group
AstraZeneca Pharmaceuticals	MasterCard International
Autodesk, Inc.	McDonald's Corporation
Bank of America	MeadWestvaco
Bank of New York	Meijer
BASF Corporation	Merck & Co.
BearingPoint	MetLife
Boston Scientific	Michelin
BP International Ltd.	Microsoft
Bristol-Myers Squibb	Miller Brewing Company
Canon USA	Morgan Stanley
Cathay Pacific Airways Limited	Moscow State University
Center for Creative Leadership	National Cryptologic School (NSA)
CIA University	National Seminars Group
Cincinnati Insurance Company	National Weather Service
Cisco Systems	Naval Personnel Development Command
Citizen's Bank	Nike
CAN	Novartis Pharmaceuticals Corp.
Colgate-Palmolive Company	Office of Comptroller of the Currency
Corning, Inc.	Office of the Secretary of Defense
COUNTRY Ins & Financial Services	Option One Mortgage Corporation
Crowe Chizek and Company LLC	Organon USA

DaimlerChrysler Academy	Paychex
Dana Corporation	PepsiCo
David Weekley Homes	Pitney Bowes, Inc.
Defense Acquisition University	PricewaterhouseCoopers
Defense Intelligence Agency	Procter & Gamble
Deloitte Consulting	Progressive Insurance
Department of Labor	Roche Diagnostics Corporation
Diebold, Inc.	Royal & Sun Alliance Insurance Group
Discover Financial Services	Sara Lee Corporation
Dow Chemical Company	Saudi Aramco
Dow Corning Corporation	Save the Children
DuPont / Pioneer Hi-Bred	Schlumberger
Eli Lilly and Company	Sears Holdings Corporation
Emirates	Siemens Building Technologies
Engenio Information Technologies	Siemens Logistics & Assembly Systems
Experian	Siemens Medical
Farm Bureau Financial Services	SSM Health Care
Fidelity Investments	State Farm
General Electric - Consumer Finance	Target Corporation
General Mills	TD Bank Financial Group
General Motors	Texas Instruments Incorporated
GlaxoSmithKline	The Boeing Company
Grainger	The Center for Association Leadership
Grant Thornton LLP	The Regence Group
Guidant Corporation	Trader Publishing Company
Harper College	Turner Broadcasting
HCA	UBS Financial Services, Inc.
Healthcare Financial Management Assoc	Unilever, plc
Herman Miller, Inc.	United Nations Development Programme
Hershey Foods	UnitedHealthcare
Hewlett Packard	Univ of Texas M. D. Anderson Cancer C

Hewlett Packard – IPG	Universal Technical Institute
Home Depot	UPS
HSBC, North America	UWSA University of Wisconsin System
InCharge Institute of America, Inc.	Verizon
ING	Wachovia Corporation
Inter IKEA Systems B.V.	Wal-Mart Stores, Inc.
JCPenney	Walt Disney World Co.
JetBlue Airways University	Washington Mutual
Jobs for the Future	Wegmans Food Markets
John Hancock Financial Services	Wendy's International
Johnson Controls	Weyerhaeuser - Cedar River Paper
JP Morgan Chase	Witness Systems
Kaiser Permanente	Xerox Corp

Table 19: The learning Consortium's members that received the survey.

4.3.1.3. Questions

The questionnaire has been discussed and negotiated with the Masie Center. In particular set requirements were: to keep the survey as short as possible and to conform the language to the target. Considering variables' description and clusters (§ 4.2.3.3.), 16 relevant factors where selected to be verified through the questions below. In table 20 are indicated the related variables even if they were omitted in the final survey.

Which of the following steps does your organization do when launching/releasing e-Learning activities?	
Does the learning department…	
QUESTION	**VARIABLE**
1. Explain to learners the advantage(s) of e-Learning (as compared with other training solutions)?	P. Relative Advantage
2. Explain the connection between the e-Learning activity and the learner's	P. Usefulness

job?	
3. Communicate the behavioral/performance goals of the e-Learning activity?	Goal Commitment
4. Share the organization's business goals for the e-Learning activity?	Institutional Commitment
5. Track whether learners have had previous experiences with e-Learning?	Experience
6. Prepare/train learners for their first e-Learning experience in your organization (with skills like time management, self-directed learning, etc.)?	Training
7. Inform learners about the details of the e-Learning activity (start date, due date, content, objectives, outputs, requirements, assignments, evaluation procedures, etc.)?	Preparation
8. Provide learners with the opportunity to try technologies/tools before actually starting the e-Learning activity?	P. Observability
9. Assess learners' expectations about e-Learning before they begin an activity?	Expectations
10. Use communication/internal marketing channels to promote the e-Learning activity (direct communication, intranet, posters, newsletters, sponsoring activities, etc.)?	Communication Behaviour
11. Enlist management/executive involvement in and support of e-Learning activities?	Corporate Motivation
12. Communicate alignment of the e-Learning activity with other training activities and with the organization's values, processes and practices?	Culture
13. Set specific time restrictions/deadlines for the e-Learning activity?	Time
14. Set guidelines for the physical environment where e-Learning takes place (e.g., space, noise, interruptions, etc.)?	Place
15. Create incentives and/or a recognition system for e-Learning results?	Incentives
16. Specify a target audience and the degree to which the activity is compulsory or voluntary?	Voluntariness

Table 20: Question of the first survey to the learning Consortium's members.

Compilers could express their judgments using a nominal scale: Always - Sometimes - Not relevant. The original ordinal scale (always, sometimes, never) was changed due to

a specific request of the staff of the Masie Center; the target was composed by managers with full power on learning activities and it was assumed that they consider not relevant what they do not decide.

Moreover, in the survey there was a special field where responders were asked to include any other step their organization took to enhance eLearning acceptance.

4.3.1.4. Results

The response *ratio* of the survey was 42%; 61 primary contacts of the Learning Consortium's out of 144 compiled the questionnaire.

The frequency of answers for each variable is reported in table 21.

%	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Always	20	33	56	26	14	5	62	7	2	33	21	32	16	7	3	58
Sometimes	60	57	34	61	44	63	32	44	37	62	74	60	76	61	52	37
Not relevant	20	10	10	13	42	32	7	49	61	5	5	8	9	32	45	5

Table 21: Percentage of the frequency of answers in the first survey.

Considering only the category of answers "always", the activity declared most done by the 62% of respondents, is:

7. to inform learners about the details of the e-Learning activity (start date, due date, content, objectives, outputs, requirements, assignments, evaluation procedures, etc.).

With 58% of managers that answered *always*, the second parameter is:

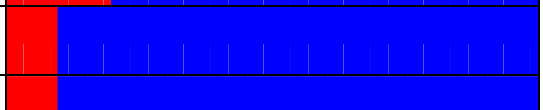
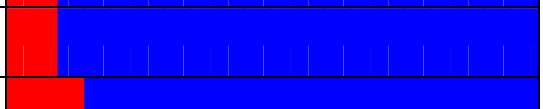
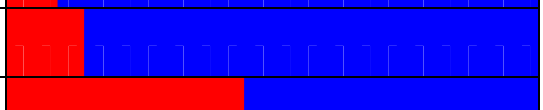
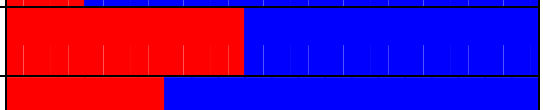
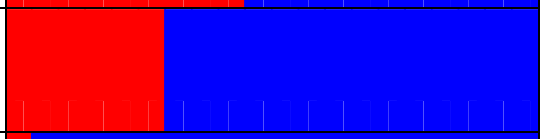
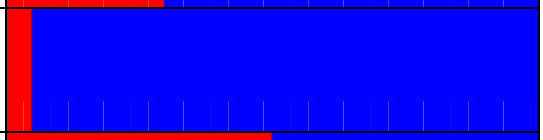
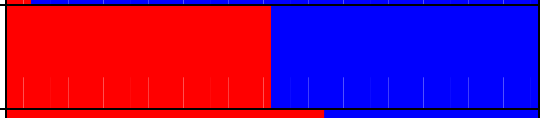
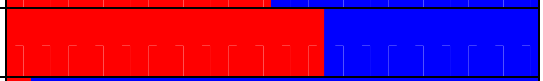
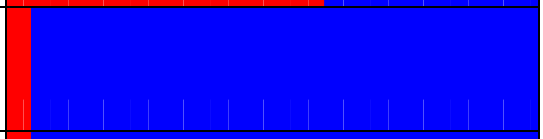
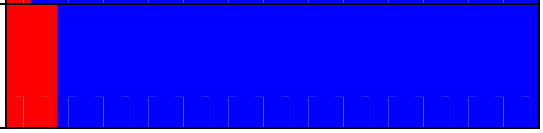
16. to specify a target audience and the degree to which the activity is compulsory or voluntary.

The less "always" done is the ninth activity listed in the survey:

9. to assess learners' expectations about e-Learning before they begin an activity.

→ Assessment of the presence

In order to assess the presence of these parameters, the categories of answer “always” and “sometimes” were merged. Percentages of the frequency of answers are indicated in table 22.

Step	Not Present	Present	
1. Explain to learners the advantage(s) of e-Learning (as compared with other training solutions)?	20.00%	80.00%	
2. Explain the connection between the e-Learning activity and the learner’s job?	10.00%	90.00%	
3. Communicate the behavioral/performance goals of the e-Learning activity?	10.00%	90.00%	
4. Share the organization's business goals for the e-Learning activity?	13.33%	86.67%	
5. Track whether learners have had previous experiences with e-Learning?	43.10%	56.90%	
6. Prepare/train learners for their first e-Learning experience in your organization (with skills like time management, self-directed learning, etc.)?	32.20%	67.79%	
7. Inform learners about the details of the e-Learning activity (start date, due date, content, objectives, outputs, requirements, assignments, evaluation procedures, etc.)?	5.08%	94.91%	
8. Provide learners with the opportunity to try technologies/tools before actually starting the e-Learning activity?	50.00%	50.00%	
9. Assess learners’ expectations about e-Learning before they begin an activity?	**60.34%**	**39.65%**	
10. Use communication/internal marketing channels to promote the e-Learning activity (direct communication, intranet, posters, newsletters, sponsoring activities, etc.)?	5.08%	94.92%	
11. Enlist management/executive involvement in and support of e-Learning activities?	**5.00%**	**95.00%**	
12. Communicate alignment of the e-Learning activity with other training activities and with the organization’s values, processes and practices?	8.47%	91.52%	

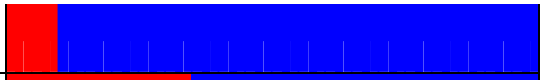
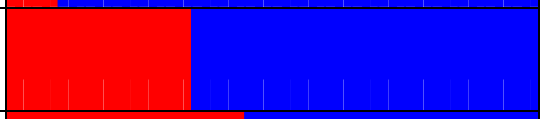
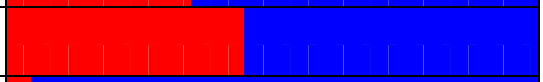
13. Set specific time restrictions/deadlines for the e-Learning activity?	8.77%	91.23%	
14. Set guidelines for the physical environment where e-Learning takes place (e.g., space, noise, interruptions, etc.)?	32.76%	67.24%	
15. Create incentives and/or a recognition system for e-Learning results?	44.07%	55.93%	
16. Specify a target audience and the degree to which the activity is compulsory or voluntary?	5.08%	94.92%	

Table 22: Frequency of the presence of parameters in the first survey.

In this way, the most present parameter results to be:

11. to enlist management/executive involvement in and support of e-Learning activities.

On the contrary, the only parameter that does not overcome the 50% level of presence is again:

9. to assess learners' expectations about e-Learning before they begin an activity.

→ Feedbacks and implications

Many feedbacks and comments have been collected through the apposite form.

Some additional steps were suggested but only two, with different formulations, recurred more than three times:

- to place "champions" in the different locations to support activities;
- to provide technical and content support during the eLearning activity.

4.3.2. Second Survey – Ranking

The second survey was built on the basis of the results of the first survey. It has been online since June to December 2006 while different categories of learning managers have been contacted to build the final eLearning Acceptance Index. Results allow us to

discover some relationships among variables and to inference possible behavioural patterns.

4.3.2.1. Sample and delivery of the survey

It was decided to include only learning managers also in this survey. The sample has been constituted by the 55 primary contacts of the Learning Consortium (§ 4.3.1.1.) who left their data for the follow-up, 12 learning managers met during the case studies, plus other 139 learning managers known by the researchers at three events in U.S. during 2005: the conference Learning 2005 in Orlando and two Extreme Learning Lab seminars held in Saratoga Springs (NY). Moreover some blogs and an online magazine published the link of the survey. It has to be noticed that people who were achieved through these last mentioned channels were not always learning managers and that they were not considered in order to have a clean sample.

Every learning manager has been contacted through an email describing the general aim of the research and reporting the link of the survey. After a week a reminder has been sent to each manager. The survey was built through a tool called Net Dimension that allows exporting data directly in SPSS.

4.3.2.2. Questions – lesson learned

The questionnaire was constituted by two parts. In the first section the parameters have been assessed about their presence, importance and communicative approach.

The second part collected general information about the compilers and their organizations.

→ Part 1

Based on the results of the first survey, the list of 16 relevant factors has been revisited. In particular three main changes occurred:

- the parameter assessing the variable *expectations*, that resulted to be less present, was merged with the question about the *experience* of eLearners:
    - "to track eLearners' expectations and/or their previous experiences with eLearning";
- two new parameters have been added based on the comments about possible additional factors left in the first survey:
    - "to place 'champions' in the different locations to support activities"
    - "to provide technical and content support during the eLearning activity";
- questions have been reformulated in order to assess separately importance, presence and communication of the new 17 parameters.

Below (Table 23), the first two questions are presented. The first item aims at discovering if each parameter is present (YES) or not present (NO) in the companies selected. The second, in stead, wants to know how important are considered those actions by learning managers (1 = not at all important; 2 = slightly important; 3 = moderately important; 4 = quite important; 5 = extremely important). The set of 17 actions are also listed in table 23 and the related variables are added even if they were not displayed in the survey.

QUESTION
1. Each organization does different activities to prepare learners before launching/releasing an eLearning activity. Please, indicate if these activities are done by your organization (YES or NO).
2. Please, indicate now your own opinion about the IMPORTANCE of the following activities (1 = not at all; 2 = slightly; 3 = moderately; 4 = quite important; 5 = extremely important).

FACTOR	VARIABLE
1. to clarify the advantage(s) of eLearning (as compared with other training solutions)	P. Relative Advantage
2. to build a connection between the eLearning activity and the learner's job	P. Usefulness
3. to specify the behavioral/performance goals of the eLearning activity	Goal Commitment
4. to specify the organization's business goals for the eLearning activity	Institutional Commitment
5. to track eLearners' expectations and/or their previous experiences with eLearning	Experience & Expectations
6. to prepare/train eLearners about relevant issues and skills in order to attend successfully an eLearning experience (i.e. time management, self-directed learning, etc.)	Training
7. to specify details of the eLearning activity (start date, due date, content, objectives, outputs, requirements, assignments, evaluation procedures, etc.)	Preparation
8. to provide eLearners with the opportunity to try technologies/tools before actually starting the eLearning activity	P. Observability
9. to use communication/internal marketing channels to promote the eLearning activity (direct communication, intranet, posters, newsletters, sponsoring activities, etc.)	Communication Behaviour
10. to enlist managers in supporting and involving in eLearning activities	Corporate Motivation
11 to align eLearning activities with other training activities and with the organization's values, processes and practices	Culture
12. to place "champions" in the different locations to support activities	Peer Communication
13. to set specific time restrictions/deadlines for the eLearning activity	Time
14. to set guidelines for the physical environment where eLearning takes place (e.g., space, noise, interruptions, etc.)	Place
15. to specify a target audience and/or the degree to which the activity is compulsory or voluntary	Voluntariness
16. to create incentives and/or a recognition system for eLearning results	Incentives
17. to provide technical and content support during the eLearning activity	Support

Table 23: The two first questions of the second survey and the 17 final parameters.

In the third question the list of 17 parameters have been translated into communicative actions; in this way it is possible to compare the communication behaviours with the respective importance and presence declared by learning managers.

QUESTION	
3. Please indicate if the relative communicative actions are done or not by your organization (YES or NO).	
FACTOR	**VARIABLE**
1. to communicate the advantage(s) of eLearning (as compared with other training solutions)	P. Relative Advantage
2. to share the connection between the eLearning activity and the learner's job	P. Usefulness
3. to communicate the behavioral/performance goals of the eLearning activity	Goal Commitment
4. to share the organization's business goals for the eLearning activity	Institutional Commitment
5. to explain eLearners' about the importance of expectations and/or their previous experiences with eLearning	Experience & Expectations
6. to explain eLearners about relevant issues and skills in order to attend successfully an eLearning experience (i.e. time management, self-directed learning, etc.)	Training
7. to explain details of the eLearning activity (start date, due date, content, objectives, outputs, requirements, assignments, evaluation procedures, etc.)	Preparation
8. to explain eLearners about the opportunity to try technologies/tools before actually starting the eLearning activity	P. Observability
9. to invite managers at using communication/internal marketing channels to promote the eLearning activity (direct communication, intranet, posters, newsletters, sponsoring activities, etc.)	Communication Behaviour
10. to invite managers at supporting and involving in eLearning activities	Corporate Motivation
11 to communicate the alignment of eLearning activities with other training activities and with the organization's values, processes and practices	Culture
12. to invite eLearners at contacting "champions" placed in the different	Peer Communication

locations to support activities	
13. to inform about specific time restrictions/deadlines for the eLearning activity	Time
14. to inform about guidelines for the physical environment where eLearning takes place (e.g., space, noise, interruptions, etc.)	Place
15. to inform about the target audience and/or the degree to which the activity is compulsory or voluntary	Voluntariness
16. to inform about incentives and/or a recognition system for eLearning results	Incentives
17. to inform about technical and content support during the eLearning activity	Support

Table 24: The third question asked to assess the communication behaviour of learning managers.

→ Part 2

At the beginning of the section it was declared that few information (name, organization, role, etc.) were about to be asked and that any reporting of results would have been kept anonymous, without reference to a specific person or organization. Questions regarded both the compiler and the organization.

It follows a table (25) where general questions are reported and where it is specified the type of answer allowed.

QUESTION	**ANSWER**
4. In which sector does your organization operate?	Business services
	Chemical
	Communications
	Consulting
	Education
	Food & beverage
	Financial services

	Government
	Healthcare
	Hospitality/entertainment
	Insurance
	Manufacturing
	Non-profit organization
	Petrochemicals
	Pharmaceutical
	Real estate
	Retail
	Transportation
	Technology
	Training supplier
5. How many employees work in the organization?	1 – 500
	501 – 1000
	1001 – 10.000
	10.001 - 50.000
	50.001 - 100.000
	100.001 - 500.000
	500.001 - 1.000.000
	1.000.001 - more than 1.000.000
6. When did your organization start offering eLearning activities?	1995
	1996
	1997
	1998
	1999
	2000
	2001
	2002
	2003

	2004
	2005
	2006
	not yet
7. Which is your role in the organization?	Analyst
	CLO
	eLearning Designer
	eLearning Consultant
	Learning Supplier
	Instructional Designer
	Teacher
	Technologist
	Training/Learning Manager
	Other
8. Could you, please, indicate your name?	
9. Could you, please, indicate your email address?	

Table 25: General questions from 4 to 9 of the second survey.

Mostly, categories of answers were chosen in collaboration with the Masie Center. Different sectors, roles and classes of employees have been singled out in the last 10 years of research activities at the Learning Consortium. The starting year of eLearning activities set in question 6 is based on data regarding the diffusion of internet and new technologies for education (Cantoni & Esposito 2004). The last two questions were open and aimed at gathering data of responders for a possible follow-up.

Results of the second survey are presented and discussed in chapter 5.

5. Results & Discussion

The final chapter will present the main results of the research, their discussion and possible future developments.

The main outcome of the research is the creation of the eLearning Acceptance Index. Through case studies and the first survey, it has been possible to identify a set of variables considered important by 100% of the sample in the second survey.

Parameters have been ranked following specific criteria such as their presence, importance and communication. Some characteristics of the sample will be presented and significant connections within the dataset identified.

Future developments and some conclusions are drawn in the last section.

5.1. Results

Data gathered through the questionnaires of the second survey have been analysed with different descriptive methods. In agreement with the research's purposes four tasks were accomplished by the investigation.

First, parameters are ranked following specific criteria such as their presence, importance and communication. In addition, some characteristics of the sample are presented and significant connections with the dataset are identified. The last section aims at comparing different clusters of variables.

5.1.1. Ranking – the eLearning Acceptance Index

The main goal of the survey was to provide a list of parameters ordered according to their presence, importance and communication within the organizations of the sample.

It follows the first grid (Table 26) where the 17 items are ranked by the frequency of their presence according to the answer "YES".

		YES (%)	**NO (%)**	**Valid**	**Missing**
Goal Commitment	3. to specify the behavioral/performance goals of the eLearning activity	85	15	54	0
Preparation	7. to specify details of the eLearning activity (start date, due date, content, objectives, outputs, requirements, assignments, evaluation procedures, etc.)	85	15	54	0
Communication Behaviour	9. to use communication/internal marketing channels to promote the eLearning activity (direct communication, intranet, posters, newsletters, sponsoring activities, etc.)	80	20	54	0
Support	17. to provide technical and content support during the eLearning activity	80	20	54	0
Corporate Motivation	10. to enlist managers in supporting and involving in eLearning activities	78	22	54	0
Voluntariness	15. to specify a target audience and/or the degree to which the activity is compulsory or voluntary	78	22	54	0

P. Usefulness	2. to build a connection between the eLearning activity and the learner's job	76	24	54	0
Culture	11. to align eLearning activities with other training activities and with the organization's values, processes and practices	75	25	53	1
Institutional Commitment	4. to specify the organization's business goals for the eLearning activity	70	30	53	1
Time	13. to set specific time restrictions/deadlines for the eLearning activity	69	31	54	0
P. Relative Advantage	1. to clarify the advantage(s) of eLearning (as compared with other training solutions)	55	45	53	1
Training	6. to prepare/train eLearners about relevant issues and skills in order to attend successfully an eLearning experience (i.e. time management, self-directed learning, etc.)	45	55	53	1
P. Observability	8. to provide eLearners with the opportunity to try technologies/tools before actually starting the eLearning activity	33	67	54	0
Experience & Expectations	5. to track eLearners' expectations and/or their previous experiences with eLearning	31	69	54	0
Incentives	16. to create incentives and/or a recognition system for eLearning results	31	69	54	0
Peer Communication	12. to place "champions" in the different locations to support activities	30	70	53	1
Place	14. to set guidelines for the physical environment where eLearning takes place (e.g., space, noise, interruptions, etc.)	30	70	54	0

Table 26: Parameters ranked according to their degree of presence.

The two variables that are declared as present by the 85% of learning managers are the *Goal Commitment* and the *Preparation*. The lowest scores were obtained by *Place* and *Peer Communication*.

If parameters are ordered according to the mean value of their importance a new list is outlined as reported in table 27.

		Mean	Standard Deviation	Valid	Missing
P. Usefulness	2. to build a connection between the eLearning activity and the learner's job	4.48	0.69	54	0
Corporate Motivation	10. to enlist managers in supporting and involving in eLearning activities	4.33	0.91	54	0
Support	17. to provide technical and content support during the eLearning activity	4.28	0.90	54	0
Goal Commitment	3. to specify the behavioral/performance goals of the eLearning activity	4.22	0.79	54	0
Preparation	7. to specify details of the eLearning activity (start date, due date, content, objectives, outputs, requirements, assignments, evaluation procedures, etc.)	4.11	0.86	54	0
Institutional Commitment	4. to specify the organization's business goals for the eLearning activity	4.09	0.90	53	1
Culture	11 to align eLearning activities with other training activities and with the organization's values, processes and practices	4.09	0.98	54	0
Communication Behaviour	9. to use communication/internal marketing channels to promote the eLearning activity (direct communication, intranet, posters, newsletters, sponsoring activities, etc.)	3.92	0.94	53	1
Voluntariness	15. to specify a target audience and/or the degree to which the activity is compulsory or voluntary	3.89	1.02	54	0
Time	13. to set specific time restrictions/deadlines for the eLearning activity	3.63	1.00	54	0
Peer Communication	12. to place "champions" in the different locations to support activities	3.45	1.10	53	1
Training	6. to prepare/train eLearners about relevant issues and skills in order to attend successfully an eLearning experience (i.e. time management, self-directed learning, etc.)	3.44	1.09	54	0
P. Relative Advantage	1. to clarify the advantage(s) of eLearning (as compared with other training solutions)	3.24	1.23	54	0
Incentives	16. to create incentives and/or a recognition system for eLearning results	3.19	1.10	54	0
Experience & Expectations	5. to track eLearners' expectations and/or their previous experiences with eLearning	3.17	1.18	54	0
P. Observability	8. to provide eLearners with the opportunity to try technologies/tools before actually starting the eLearning activity	3.15	1.22	54	0
Place	14. to set guidelines for the physical environment where eLearning takes place (e.g., space, noise, interruptions, etc.)	2.81	1.12	54	0

Table 27: Parameters ranked according to their importance.

According to the mean value, two variables resulted to be more important: *Perceived Usefulness* and *Corporate Motivation*. In the last positions are placed *Perceived Observability* and again *Place*.
Moreover, two remarks have to be done. All the variables obtained a mean value higher than the break point 2.5 and the standard deviation shows a quite homogeneous distribution among answers, especially in the first positions of the ranking.

The third *criterion* used to rank the variables is related to the presence of communication behaviour of learning managers. In table 28 the 17 items are ordered according to the frequency of the answer "YES".

		YES (%)	**NO (%)**	**Valid**	**Missing**
Preparation	7. to explain details of the eLearning activity (start date, due date, content, objectives, outputs, requirements, assignments, evaluation procedures, etc.)	81	19	52	2
Voluntariness	15. to inform about the target audience and/or the degree to which the activity is compulsory or voluntary	81	19	52	2
Goal Commitment	3. to communicate the behavioral/performance goals of the eLearning activity	79	21	52	2
Support	17. to inform about technical and content support during the eLearning activity	77	23	52	2
Time	13. to inform about specific time restrictions/deadlines for the eLearning activity	75	25	52	2
P. Usefulness	2. to share the connection between the eLearning activity and the learner's job	67	33	52	2
Institutional Commitment	4. to share the organization's business goals for the eLearning activity	67	33	51	3
Communication Behaviour	9. to invite managers at using communication/internal marketing channels to promote the eLearning activity (direct communication, intranet, posters, newsletters, sponsoring activities, etc.)	60	40	52	2
Corporate Motivation	10. to invite managers at supporting and involving in eLearning activities	60	40	52	2
Culture	11. to communicate the alignment of eLearning activities with other training activities and with the organization's values, processes and practices	56	44	52	2
P. Relative Advantage	1. to communicate the advantage(s) of eLearning (as compared with other training solutions)	48	54	53	1

Training	6. to explain eLearners about relevant issues and skills in order to attend successfully an eLearning experience (i.e. time management, self-directed learning, etc.)	37	63	52	2
Peer Communication	12. to invite eLearners at contacting "champions" placed in the different locations to support activities	35	65	52	2
Incentives	16. to inform about incentives and/or a recognition system for eLearning results	33	67	52	2
Experience & Expectations	5. to explain eLearners' about the importance of expectations and/or their previous experiences with eLearning	29	71	52	2
P. Observability	8. to explain eLearners about the opportunity to try technologies/tools before actually starting the eLearning activity	29	71	52	2
Place	14. to inform about guidelines for the physical environment where eLearning takes place (e.g., space, noise, interruptions, etc.)	25	75	52	2

Table 28: Parameters ranked according to their communication.

In this list the two first variables are *Preparation* and *Voluntariness* with 81% of positive answers given by the learning managers of the sample. In the last position with only the 29% of "YES", there is the variable *Place*.

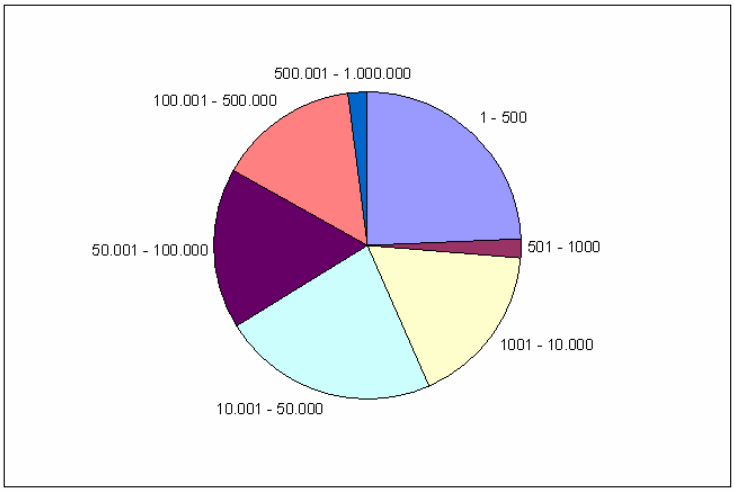
It has to be noticed that, although few similarities, there are many differences among the three ranked lists and they will be further described in the following paragraph (§ 5.2.).

5.1.2. Description of the sample

In the second part of the survey some information about the responders and their organizations were asked. In this way, it is possible to further describe the sample and to isolate specific characteristics that can be relevant to understand the distribution of the answers.

→ Number of employees

In table 29 and in the corresponding chart, are displayed the distribution of the companies according to the number of employees.



	Frequency	Percent
1 – 500	13	24.07
501 - 1000	1	1.85
1001 – 10.000	9	16.67
10.001 - 50.000	12	22.22
50.001 - 100.000	9	16.67
100.001 - 500.000	8	14.81
500.001 - 1.000.000	1	1.85
TOTAL	53	98.15
No Answer	1	1.85

Table 29: Distribution of companies according to the number of employees.

This *datum* is usually used as the main indicator of the size of an organization. Here it is possible to divide among “small-medium” and “big” companies, setting a break point of the categories and distinguishing between companies with more than 50.000 employees or less than 50.000 employees.

→ Began year

It was also asked to learning managers in which year their company started to deliver eLearning activities. In table 30 answers are reported.

	Frequency	Percent
1995	16	29.63
1997	3	5.56
1998	7	12.96
1999	4	7.41
2000	7	12.96
2001	4	7.41
2002	3	5.56
2003	4	7.41
2004	1	1.85
2005	1	1.85
2006	3	5.56
not yet	1	1.85
TOTAL	54	100.00

Table 30: Distribution of companies according to the year of began for eLearning activities.

Also in this case, it is possible to identify a break point in order to single out two new categories of companies such as "newcomers", that started after 2000 and "more expert" organizations that started before 2000.

→ Sector

Information about the sector in which companies operate was also collected. Table 31 shows the field of action of the 53 organizations that provided an answer.

	Frequency	Percent
Business services	3	5.56
Chemical	1	1.85
Communications	1	1.85
Consulting	4	7.41
Education	4	7.41
Food & beverage	1	1.85

Financial services	3	5.56
Government	3	5.56
Healthcare	3	5.56
Insurance	4	7.41
Manufacturing	11	20.37
petrochemicals	1	1.85
Pharmaceutical	3	5.56
Transportation	3	5.56
Technology	4	7.41
Training supplier	4	7.41
TOTAL	53	98.15
No Answer	1	1.85

Table 31: Distribution of companies according to their sector.

Also in this case, it can be interesting to see if there is any significant connection between the sector to which companies belong to and the distribution of answers.

5.1.3. Crossing variables

Even if the main goal of the survey was to describe the variables according to their presence, importance and communication, it was decided to further exploit the dataset. Characteristics of the organizations were analysed together with the answers about the presence of variables; moreover, through the Chi Square test, the statistical significance of relationships has been assessed.

→ Presence and size

In the first series of crossings between the presence of variables and the size of the companies (if employees are less or more than 50.000) resulted significant the following associations.

In table 32, it can be seen that the parameter assessing the *Goal Commitment* is likely to be more present in small-medium companies.

			Presence of *Goal Commitment*		Total
			YES	NO	
If employees are less or more than 50.000	**Small-Medium**	Count	27	8	35
		Expected Count	29.8	5.2	35.0
	Big	Count	19	0	19
		Expected Count	16.2	2.8	19.0
Total		Count	46	8	54
		Expected Count	46.0	8.0	54.0

Table 32: A crosstab between the presence of *Goal Commitment* and the size of companies.

In the following grid (Table 33), the relationships between the size of the companies and the presence of the variable *Institutional Commitment*, is justified by 22 small-medium companies.

			Presence of *Institutional Commitment*		Total
			YES	NO	
If employees are less or more than 50.000	**Small-Medium**	Count	22	12	34
		Expected Count	23.7	10.3	34.0
	Big	Count	15	4	19
		Expected Count	13.3	5.7	19.0
Total		Count	37	16	53
		Expected Count	37.0	16.0	53.0

Table 33: A crosstab between the presence of *Institutional Commitment* and the size of companies.

Finally, the number of employees resulted significant where it was crossed with the presence of the *Communication Behaviour* (Table 34).

			Presence of *Communication Behaviour*		Total
			YES	NO	
If employees are less or more than 50.000	**Small-Medium**	Count	29	6	35
		Expected Count	27.9	7.1	35.0
	Big	Count	14	5	19
		Expected Count	15.1	3.9	19.0
Total		Count	43	11	54
		Expected Count	43.0	11.0	54.0

Table 34: A crosstab between the presence of *Communication Behaviour* and the size of companies.

→ Presence and year of beginning

The second set of crossings wanted to verify the hypothesis that the year, in which companies started eLearning activities, influences the presence of variables.

Companies were divided in two clusters (§ 5.1.2.): *newcomers* and *more expert* organizations.

Table 35 shows a connection between data and the category of *newcomers* organizations. In fact, 29 learning managers of companies who started eLearning after 2000, answered "YES" about the presence of the *Goal Commitment* variable.

			Presence of *Goal Commitment*		Total
			YES	NO	
If they start before or after 2000	**Newcomers**	Count	29	1	30
		Expected Count	25.6	4.4	30.0
	More export	Count	17	7	24
		Expected Count	20.4	3.6	24.0
Total		Count	46	8	54
		Expected Count	46.0	8.0	54.0

Table 35: A crosstab between the presence of *Goal Commitment* and the year of beginning.

Newcomers organizations resulted to be likely positive also toward the *Culture* issue. The 87% of organizations that started eLearning after 2000 attested the presence of the parameter.

			Presence of *Culture*		Total
			YES	NO	
If they start before or after 2000	**Newcomers**	Count	26	4	30
		Expected Count	22.6	7.4	30.0
	More export	Count	14	9	23
		Expected Count	17.4	5.6	23.0
Total		Count	40	13	53
		Expected Count	40.0	13.0	53.0

Table 36: A crosstab between the presence of *Culture* and the year of beginning.

5.1.4. Patterns

The last set of analysis intended to verify the existence of behavioural patterns among variables. On one side it has been utilized the factor analysis to estimate common factors or latent variables; on the other side the behaviour of clusters of variables (§ 4.2.3.3.) has been assessed.

→ Factor Analysis

In table 37 is possible to distinguish among five clusters of variables raised from the factor analysis.

Each class is differently populated and variables appear distributed in accordance to several criteria. The “support” issue seems to behave in a unique way, while in the first row, many parameters are gathered together.

	Factors				
	1	2	3	4	5
1. to clarify the advantage(s) of eLearning (as compared with other training solutions)	X				
2. to build a connection between the eLearning activity and the learner's job		X			
3. to specify the behavioral/performance goals of the eLearning activity		X			
4. to specify the organization's business goals for the eLearning activity				X	
5. to track eLearners' expectations and/or their previous experiences with eLearning	X				
6. to prepare/train eLearners about relevant issues and skills in order to attend successfully an eLearning experience (i.e. time management, self-directed learning, etc.)	X				
7. to specify details of the eLearning activity (start date, due date, content, objectives, outputs, requirements, assignments, evaluation procedures, etc.)			X		
8. to provide eLearners with the opportunity to try technologies/tools before actually starting the eLearning activity	X				
9. to use communication/internal marketing channels to promote the eLearning activity (direct communication, intranet, posters, newsletters, sponsoring activities, etc.)	X				
10. to enlist managers in supporting and involving in eLearning activities	X				
11 to align eLearning activities with other training activities and with the organization's values, processes and practices		X			
12. to place "champions" in the different locations to support activities	X				
13. to set specific time restrictions/deadlines for the eLearning activity				X	
14. to set guidelines for the physical environment where eLearning takes place (e.g., space, noise, interruptions, etc.)	X				
15. to specify a target audience and/or the degree to which the activity is compulsory or voluntary			X		
16. to create incentives and/or a recognition system for eLearning results	X				
17. to provide technical and content support during the eLearning activity					X

Table 37: Parameters are distributed in accordance with the factor analysis.

→ Clusters of variables

After case studies variables have been divided in 4 clusters and data were analysed in order to compare their results.

The first graphic (Figure 31) shows that the two categories of variables, which registered the highest score about the importance, are *meaning* (71%) and *involvement* (66%). Both categories are related to the *commitment* component (Table 18) of MeLA (Figure 21).

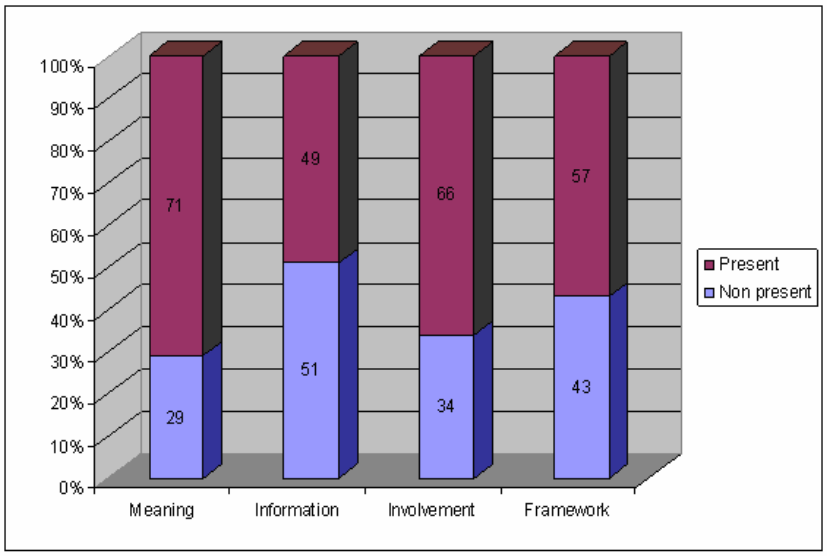


Figure 31: Data about the presence of variables divided in clusters.

The same aggregation has been operated for the importance of variables and data approximately confirm the distribution of the previous analysis (Figure 32). Both *meaning* (75%) and *involvement* (70%) register even a higher percentage in comparison with data in figure 31.

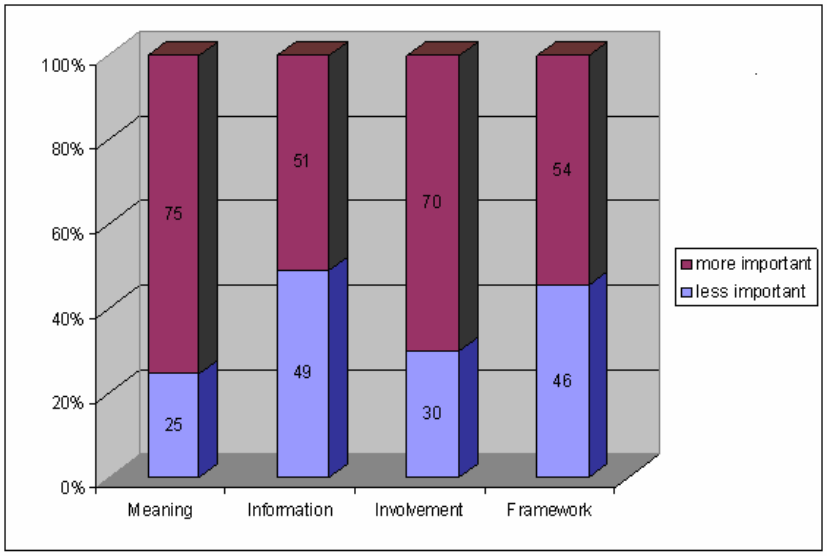


Figure 32: Data about the importance of variables divided in clusters.

Coming to the communication behaviour of learning managers, an important change in the distribution of answers occurs especially regarding the *involvement* cluster (52%).

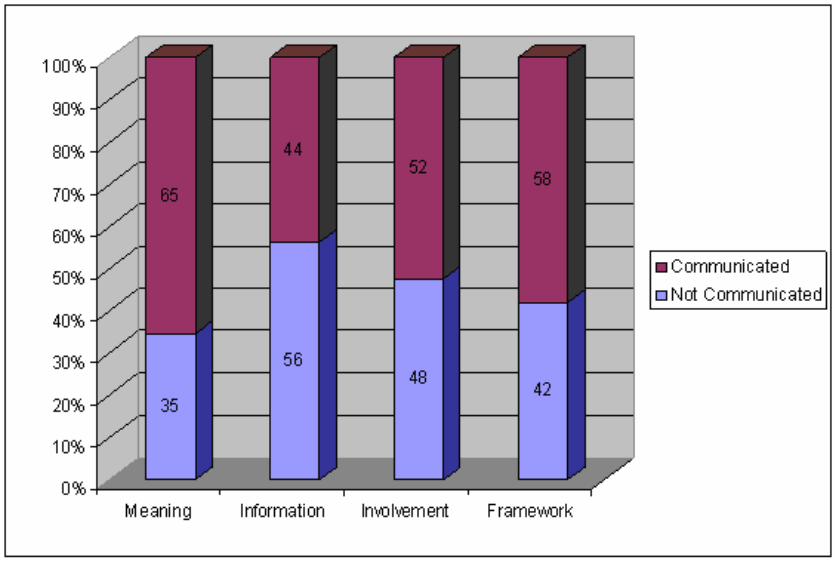


Figure 33: Data about the communication of variables divided in clusters.

5.2. Discussion of results

The main result of the research can be considered the creation of the eLearning Acceptance Index. Through case studies and surveys it has been possible to identify a set of variables considered important by 100% of the sample (Table 27).
This tool can now be implemented by eLearning managers to enhance acceptance of their eLearning activities. Indicators of variables created in the operationalization phase can help practitioners in assessing the first part of their learning processes. Actions suggested in the eLearning Acceptance Index constitute a body of operative steps to deal with the acceptance issue. Moreover, it enhances the awareness about practices, values and behaviours in the corporate sector.

This set of 17 variables has been ranked in accordance with their presence, importance and communication and two main considerations can be outlined together with some general remarks to the results of the second survey.
First of all, from the list of parameters ranked according to their degree of presence (Table 26), it is possible to argue that companies are focused mainly on short-term activities. It seems than they are more worried about taking care of details (specify goals, start date, requirements, assignments …) than to build a sound "environment" for eLearning and to promote a cultural change.
In fact, also observing the ranking related to the importance (Table 27), in the last positions are found again variables regarding more general aspects like the system of incentives, the assessment of expectations and experiences, the observability of eLearning activities and possible guidelines for the physical environment.
Second, considering the communication issue, it can be noticed that companies show a positive attitude toward communication practices even if it seems they are not fully aware of the potentiality of communication channels.

The ranking of communicative actions (Table 28) does not count in the first positions variables related to the motivation of participants. Communicative actions are more present when precise information is delivered (explanations of details, target, goals …) than when participants can be engaged and managers involved (corporate motivation, alignment of values, peer communication …).

Crossing variables such as the size of companies and their "level of experience" (Table 29), it has been noticed that companies with less than 50.000 or that started eLearning activities after 2000, showed a significant presence of activities related to the *commitment* to eLearning activities. In particular, an interesting datum concerns the significant presence of the *Culture* variable in "newcomers" organizations (Table 36).
The results of the factor analysis introduce new elements that can be useful for a further classification of variables. Parameters seem to be distributed according to external elements that explicitly have not been included in this research such as the "essentiality" and the cost of activities. In other terms, it emerges that some activities of the eLearning Acceptance Index are more crucial and have to be done before than others (specification of the target audience, explanation of course's details, …). Moreover, other activities, even if considered very important, imply an important investment of resources that affect their implementation like the case of the technical and cognitive support to eLearning activities (Table 37).
Comparing the results of clusters emerges that companies recognize the value and act in order to create a *commitment* of eLearners to eLearning activities. Nevertheless, a lack of communicative activities (52%) (Figure 33) can be observed if comparing data with managers' declaration of presence (66%) (Figure 31) and importance (70%) (Figure 32). A bigger effort is needed to plan communication activities in order to support eLearning activities and to involve eLearners.

5.3. Limitations & future developments

There are many opportunities of development that future studies can seize.

First of all, it is possible to improve the methodological path through an extension of the sample and the refinement of the final questionnaires.

In fact, on one side, the attempt to collaborate with many private organizations constituted an original and rich approach to the acceptance issue but on the other side represented an important limit. It was difficult to follow a linear and methodical path and, in particular during the delivery of the first survey, several constraints were met.

The sample could be enlarged both numerically and geographically. A larger set of companies could be identified by future studies so that also interesting comparisons with European and Asian countries can be drawn.

Based on the experience of this research the questions of the surveys could also be improved. Two challenges have been composed by the different meanings of the words used in the eLearning sector that can lead to a misunderstanding and by the proper terms to indicate and assess the variables selected.

Second, the descriptive nature of the work does not include a validation model of the research that could improve the value of the final index. A stronger interpretative framework can be built through the creation and the assessment of stronger relationships among variables.

It is desirable that future studies could integrate the Map of eLearning Acceptance and contribute to the definition of a prescriptive model.

In particular, taking into account all the three categories of variables of MeLA, several other variables can be added and operationalized through new case studies and different experiences.

Finally, the most interesting output would be the creation of a set of guidelines for the management science.

Consistent implementation procedures could be added to the eLearning Acceptance Index to ensure an effective and sustainable rooting of eLearning activities within private organizations.

5.4. Conclusions

This research made a step forward in the comprehension of the problem of innovations and eLearning acceptance.

A path has been built to answer the three research questions (§ 1.3.4.). The main outcome of the research is represented by two original instruments that eLearning researchers and practitioners can implement: the Map of eLearning Acceptance (MeLA) and the eLearning Acceptance Index.

In particular, the Map of eLearning Acceptance allows understanding phases and variables that characterizes the eLearning acceptance process (Q1); it offers an explanation framework for the issue of eLearning acceptance and synthesises the research conducted in the sector. The focus operated on the map and the results of the case studies have helped to better describe the role of the context and to highlight the main variables (Q2).

On the other side, a big effort has been done to build an eLearning Acceptance Index and to define the main activities that an organization can do in order to equip eLearners to accept an eLearning experience. A long refining process led to the second survey where parameters have been evaluated important by the 100% of the sample.

In addition, a specific attention has been devoted to understand the role of communication and to identify the significant communicative behaviours in an organization (Q3).

In conclusion, it is possible to state that companies of the sample seem to be sensitive to the eLearning Acceptance problem even if not fully aware and mature to create the proper context and to exploit communication channels.
In particular, it emerges that eLearning managers are familiar with tools and strategies to enhance eLearning Acceptance but they lack of a farseeing approach.
They are more focused on solve short term issues instead of building an eLearning culture and a comprehensive environment to enhance acceptance of innovations.
Moreover, communication channels are more exploited to deliver information than to involve and motivate people.

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Appendix

Authorized Case studies' Reports:

- Banca Intesa
- Ernst & Young
- Esprinet
- Isvor

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NewMinE Lab

Comunicare l'eLearning in una organizzazione

Il caso di Esprinet

dr. Chiara Succi

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Introduzione

Obiettivi e struttura

Obiettivi

Questo documento intende:

- studiare l'inserimento delle nuove tecnologie in Esprinet
- osservare le principali problematiche e i punti di forza emersi durante il primo anno di attività
- offrire alcuni suggerimenti per sviluppi futuri delle nuove tecnologie della formazione in Esprinet

Struttura del documento

La prima parte del report descrive il contesto in cui si sono inserite le attività online e offre una panoramica di aspetti positivi e problematici presenti in questa esperienza.

La seconda parte mostra i risultati dei questionari distribuiti dal reparto di formazione e quelli di alcune interviste che sono state condotte.

Infine si trovano alcuni suggerimenti che potrebbero essere utili all'azienda in vista del secondo anno del progetto ESC - English Speaking Company, e di un possibile ampliamento delle attività in eLearning.

Il contesto

Raccolta del materiale e descrizione delle attività

Knowledge base

Le informazioni su cui si basa questo documento sono:

- incontro con Luigi Trivellato, RosaMaria Colella, Alessandra Venco e Massimo Oliveri (25-07-2003);
- incontro con Alessandra Venco e Elena Bozzon (01-08-2003);
- interviste a Elena Bozzon, Virginia Claeys, Elisabetta Eredi e Giulia Perfetti (04-09-2003);
- dati relativi ai risultati e alla frequenza dei corsi online e in aula;
- risultati dei questionari distribuiti per misurare la soddisfazione degli studenti dei corsi online e in aula;
- comunicazioni interne del progetto ESC;
- piano di comunicazione e vari documenti del progetto ESC.

Il presente rapporto è stato poi discusso e concordato con il professor Lorenzo Cantoni, direttore del NewMinE – New Media in Education – Lab.

Privacy issue

Le informazioni contenute nei documenti messi a disposizione sono state trattate con la massima riservatezza e usate esclusivamente per la redazione del presente documento.

Il contesto di studio

L'azienda: Esprinet è leader italiano nel mercato della distribuzione di prodotti informatici (hardware, software e consumabili); l'azienda conta circa 500 dipendenti, guidati da 11 dirigenti. Si rivolge ad un mercato di 18.000 rivenditori e il 75% delle vendite avviene online.

La formazione: sono presenti due reparti. Esprinet Campus si occupa di seguire la formazione dei clienti a cui vengono distribuiti i prodotti. La formazione interna, direttamente guidata dal reparto di HR di Esprinet, si occupa di seguire la crescita professionale dei 500 dipendenti dell'azienda. Il progetto di formazione interna più importante che è stato lanciato nel 2002 è stato English Speaking Company.

*ESC: L'o*biettivo del progetto è quello di creare un sistema di apprendimento della lingua inglese che conduca l'azienda a divenire una English Speaking Company. Lo scopo principale è quello di

abbattere le eventuali barriere linguistiche che potrebbero condizionare lo sviluppo di relazioni internazionali.

Per raggiungere tali obiettivi sono state pianificate le seguenti attività per l'anno 2002-2003:

- Corso in aula per 40 persone (due ore a settimana)
- Corso online per 30 dipendenti (otto/dieci ore al mese)
- Corso in aula personalizzato per 20 quadri
- "Sally's homepage"
- Attività varie

Inserimento del corso online

All'interno del progetto ESC si è deciso di sperimentare la formazione online sia per contenere i costi del progetto e sfruttare le infrastrutture disponibili sia per iniziare a valutare questo nuovo tipo di formazione.

Sono state acquistate 30 licenze di Global English (GE) e il relativo test online per la misura del livello[1] di inglese di tutti i dipendenti. Questo test è stato svolto da 308 persone su circa 500.

Tabella 1: Classificazione dei dipendenti tra i vari livelli

Avanzato	5	4	3	2	1	Base	Totale
5	28	63	62	78	70	2	308
2%	9%	20%	20%	25%	23%	1%	100%

Tra le persone che si sono dimostrate superiori al terzo livello, ne sono state selezionate 30 per seguire il corso online mentre 40, tra i dipendenti con risultati più bassi, sono stati invitati a seguire il corso in aula. La selezione delle persone è avvenuta secondo criteri di priorità aziendale (livello) e di funzione (sono state favorite le aree di marketing di prodotto e la supply chain).

Il corso online è stato lanciato a ottobre durante una giornata di presentazione, ma di fatto è partito a novembre poiché si sono dovuti risolvere alcuni problemi tecnici (es. distribuzione delle cuffie). Sono state comunicate le regole a cui attenersi (frequenza, test, ecc…) ed è stata segnalata l'attività di monitoraggio su cui i formandi sarebbero stati informati mensilmente.

Il tasso di frequenza è stato giudicato soddisfacente fino al mese di gennaio, momento in cui il ciclo di lavoro si intensifica e i dipendenti hanno dovuto dedicarsi maggiormente alle loro attività lavorative. A dicembre e a luglio è stato ripetuto il test ed è possibile perciò verificare l'andamento degli apprendenti (cfr. tab. 2).

[1] La scala di valutazione utilizzata è quella del test di Global English che utilizza questa graduatoria di livelli linguistici: 0 Base (0-90); 1 Principiante (91-180); 2 Principiante (181-260); 3 Principiante (261-354); 4 Intermedio (355-503); 5 Intemedio (504-649); 6 Avanzato (650-750).

Il corso GE poteva essere seguito sia da casa che dalla propria postazione di lavoro. Inoltre sono state allestite 10 postazioni nell'area Campus per le persone che avevano bisogno di maggiore tranquillità per la fruizione del corso.

Le problematiche

Discutendo con i responsabili dell'ufficio delle risorse umane sono state evidenziate le problematiche principali da affrontare:

- l'eLearning è un nuovo strumento che deve trovare la sua funzione all'interno della formazione aziendale; deve essere integrato più efficacemente come supporto e come arricchimento delle attività di formazione;
- quando una persona è seduta alla sua postazione di lavoro e deve frequentare per un'ora il corso online, tutto entra in competizione con l'eLearning; squilla il telefono, arrivano delle comunicazioni via posta elettronica, passa un collega a chiedere delle informazioni, ci sono delle scadenze urgenti ecc.…;
- attualmente esso è utilizzato per attività sperimentali ed è difficile perciò avere gli elementi necessari per una valutazione adeguata;
- bisogna individuare incentivi e disincentivi per assicurarsi che le persone frequentino il corso. Per esempio se un dipendente ha a disposizione una licenza per un anno e non vi accede mai non è giusto offrirgli la stessa possibilità l'anno successivo;
- si devono individuare gli strumenti corretti con cui accompagnare un corso online, così da offrire un'esperienza di *blended learning* (per es. *discussion forum* ecc.…);
- il ciclo dei corsi risente fortemente dei picchi di lavoro e dopo una fase iniziale di grande entusiasmo ci si è scontrati con un forte calo delle presenze.

I punti di forza

Nel primo anno di sperimentazione del corso online si è ottenuto un discreto successo dal momento che il 33% (10 su 30) degli apprendenti è progredito di un livello nella competenza della lingua inglese. L'azienda, infatti si distingue per alcune caratteristiche che favoriscono l'inserimento e la valutazione delle nuove tecnologie della formazione:

- buona informatizzazione dell'azienda; ogni dipendente è abituato a lavorare con il Personal Computer ed è in grado di svolgere le operazioni di base. L'inserimento di un corso online in questo senso non preoccupa i responsabili;
- Esprinet può essere definita una società web-oriented perché molte delle sue operazioni avvengono in rete;

- il progetto ESC, dentro cui è inserito il corso online d'inglese, ha goduto di un buono sponsoring interno e di appoggio dalla direzione aziendale;
- la cultura aziendale si fonda sui temi della responsabilità personale e del raggiungimento di obiettivi prefissati (*task-oriented*); entrambe le caratteristiche si prestano al profilo di "eLearner" che si trova a gestire da solo il proprio tempo e il proprio percorso di studio;
- sono stati realizzati tre test per valutare gli studenti, sono stati distribuiti dei questionari per verificare la loro soddisfazione e sono stati monitorati costantemente gli accessi al corso online. Queste operazioni permettono di avere a disposizioni molti dati per valutare l'efficacia di GE e per realizzare un confronto con il corso in aula.

Analisi dei dati

Risultati della raccolta dati

Test e monitoraggio

I corsisti sono stati sottoposti al test di GE in tre momenti: luglio 2002, gennaio 2003 e luglio 2003. Nella tabella 2 mostriamo i dati relativi ai punteggi ottenuti in media nella prima sessione (Test A) e nell'ultima (Test B). Nelle colonne seguenti i dati mostrano l'incremento medio di livello e il numero totale di passaggi di livello positivi per i due tipi di studenti.

Nel test generale di classificazione di luglio 2002, in media i corsisti destinati all'online avevano un punteggio di 445 e quelli in aula di 262. Tenendo conto dei livelli linguistici del test di GE registriamo nel primo caso un incremento dello 0.41 con 10 passaggi di livello e in aula un incremento medio dello 0.57 con 19 passaggi.

Tabella 2: Confronto tra i risultati dei test di studenti in aula e online

	Test A	Test B	Incremento	Passaggi
ONLINE	445	521	0.41	10
AULA	262	274	0.57	19

Nella lettura di questi dati bisogna peraltro tenere in considerazione il fatto che il ritmo d'apprendimento delle lingue solitamente mostra incrementi maggiori nelle prime fasi. Di più, vi sono senz'altro elementi di aleatorietà/disturbo, dovuti – ad esempio – alla motivazione di chi ha sostenuto il test, al fatto di conoscere meglio alcuni aspetti linguistici richiesti da un test e non da un altro, e così via (questi aspetti potrebbero spiegare i casi in cui gli apprendenti sono scesi di livello fra il primo e l'ultimo test).

Confrontando poi i seguenti risultati con i dati ottenuti durante il monitoraggio, si può osservare che l'incremento di livello non è sempre proporzionale al numero di ore[2] di frequenza.

[2] Il numero di ore effettivo è stato calcolato dai responsabile della formazione seguendo questo algoritmo: n° delle attività * 15/60 (assumendo che in media per svolgere un esercizio vengono impiegati 15 minuti).

Tabella 3: Tempo effettivo di frequenza del corso e incremento di livello

Tempo effettivo	Incremento
24	**1**
21	**1**
21	**1**
21	**1**
5	**1**
50	**1**
211	**0**
101	**0**
7	**1**
148	**0**
2	**1**
118	**1**
14	**1**

Questionario e Interviste

A dicembre è stato distribuito un questionario agli studenti che hanno frequentato il corso online per verificare la loro soddisfazione. Di seguito riportiamo una tabella che sintetizza i loro giudizi sul corso (da 1–negativo a 6–positivo).

Tabella 4: Alcune domande del questionario e media delle risposte

Domande	Media
1 – Hai riscontrato difficoltà nell'approcciare questo metodo di studio?	2.5
3 - Come ti trovi a gestire il tuo piano di studi on line?	4
5 - Il corso è strutturato in maniera coerente alle tue esigenze?	4
6 - Trovi utile svolgere le attività?	4.6
7 - Trovi utile seguire le lezioni?	4.5
8 - Con quale frequenza utilizzi la modalità off line?	2.5
10 - Quanto è di tuo gradimento il corso?	4.3

Da queste risposte deduciamo che in generale i dipendenti sono stati soddisfatti del corso; hanno avuto poche difficoltà (2,5) nell'approciare il nuovo metodo di studio, hanno trovato utile (4,6) lo svolgimento delle attività e in generale dichiarano di aver gradito (4,3) il corso GE.

Nel questionario erano presenti anche domande libere in cui gli apprendenti potevano rispondere argomentando più ampiamente. Per esempio con la domanda 4 si chiedeva quali altri strumenti avrebbero voluto avere a disposizione per facilitare il loro iter formativo. Gli studenti per lo più hanno espresso il desiderio di avere un insegnante con cui confrontarsi, delle sessioni di esercizio orale e dei gruppi di lavoro.

Una seconda parte del formulario indagava aspetti legati al progetto ESC in generale. Alla domanda “Come giudichi il progetto ESC?” si è registrato l’indice di gradimento più elevato di 5,4.

Dalle 4 interviste che sono state condotte in Esprinet, è stata confermata l’ipotesi che il progetto ESC è molto apprezzato sia perché l’inglese è un oggetto ritenuto dai dipendenti di grande importanza sia perché è apprezzato un interessamento di questa natura da parte dell’azienda. Purtroppo però le occasioni per parlare inglese, sia nella vita privata che in quella professionale, sono abbastanza rare. Tutte le persone hanno dichiarato che effettivamente non hanno bisogno dell’inglese ma che ritengono indispensabile impararlo immaginando che in futuro dovranno parlare questa lingua.

Osservazioni e suggerimenti

Comunicazione e integrazione di un progetto

Quattro aree di intervento

Definizione degli obiettivi:

Il progetto ESC ha una doppia funzione all'interno di Esprinet. Da un lato quella di introduzione della lingua inglese nel tentativo di portare tutti i dipendenti dell'azienda ad avere delle buone competenze linguistiche; dall'altro lato ESC rientra in un progetto più ampio di creazione di una cultura aziendale.

Per questo motivo talvolta è difficile comprendere gli obiettivi delle attività proposte dal progetto. Per alcuni dipendenti, infatti, non è chiaro il legame tra i corsi e le attività proposte e l'ambito applicativo nel loro lavoro.

Per colmare questo *gap* si dovrebbero creare maggiori occasioni in cui utilizzare la lingua inglese o altrimenti concentrarsi solo sulla formazione di figure che effettivamente devono parlare inglese nel loro lavoro o nella vita privata.

Inoltre la definizione di un piano di comunicazione per ESC, che tenga conto dei suddetti elementi, potrebbe aiutare l'azienda a chiarire e a comunicare i propri obiettivi.

Definizione del target:

Le licenze del corso di GE sono state distribuite seguendo criteri intuitivi e ragionevoli. Alla luce dell'esperienza si potrebbe riconsiderare la divisione degli apprendenti tra aula e corso online.

Alcuni dei dipendenti che hanno seguito il corso online, e quindi con una padronanza della lingua medio-alta, sostengono che il corso sia carente per chi necessita di perfezionare la lingua e concentrarsi, per esempio, su alcune costruzioni lessicali. Altre persone invece sostengono che lo strumento risponde perfettamente alle loro esigenze.

Potrebbe quindi essere utile consultare gli stessi dipendenti nella scelta della modalità in cui seguire il corso e si potrebbe pensare ad una combinazione tra aula e corso online. Per esempio si potrebbe

ipotizzare che frequentino (principalmente) l'aula gli studenti con il livello 0,1,3,5 e che studino (principalmente) al computer quelli ai livelli 2,4,6.

Comunicazione:

Quando si propone un corso online è necessario spiegare le potenzialità dello strumento e come si utilizza tecnicamente (come è stato fatto) ma anche quali sono le implicazioni per l'apprendente.

Per esempio il forte disorientamento portato dall'autogestione del tempo di un corso online potrebbe essere supportato da una ulteriore giornata introduttiva in cui si preparano i destinatari, si orientano le aspettative e si suggeriscono opportune strategie di comportamento.

Durante l'anno "accademico" si è registrato un calo di presenze nel periodo di gennaio, momento in cui anche il reparto di formazione ha smesso di inviare i report di valutazione e i relativi commenti. Si consiglia di perseverare nei richiami (ripensando eventualmente alla strategia di comunicazione) e di non rinunciarvi, perché questo potrebbe avallare gli abbandoni dei dipendenti.

È importante che sia definita una sola persona per l'invio delle comunicazioni in modo che sia chiara la figura di riferimento del progetto; può essere utile che questa sia presente tra gli apprendenti del corso ma si deve essere consapevoli che la sua condotta sarà osservabile da tutti i dipendenti. Le regole del corso che sono comunicate devono essere rispettate innanzitutto dal reparto di formazione.

I report che vengono inviati sono pubblici e questo elemento potrebbe essere sfruttato inserendo degli incentivi (viaggio premio a Londra, 5 ore con un insegnante madrelingua,…) per stimolare una corretta competizione tra i dipendenti e incentivare la loro partecipazione alle attività di ESC.

Preparazione del contesto:

Affinché un elemento di innovazione, come un corso online, si integri nei processi aziendali, è necessario che l'azienda sia disposta a cambiare in alcuni aspetti. Di seguito alcuni esempi e spunti.

Tra le regole del corso era specificato di effettuare le lezioni per 8-10 ore al mese come era previsto per il corso in aula.

Grazie all'analisi dei dati si è osservato che il numero di ore di fruizione del corso non corrisponde sempre a un incremento di livello dell'apprendente. Questo elemento suggerisce che probabilmente la

misura della formazione in ore non è più così significativa e che nella valutazione delle attività si devono considerare nuovi fattori.

Nella pianificazione delle attività è bene tenere in considerazione anche i periodi di lavoro più intensi per evitare una competizione tra formazione e impegni lavorativi.

L'azienda ha messo a disposizione dei dipendenti dei corsi online riguardanti diverse discipline; una sessantina di persone ha richiesto la licenza di questi corsi ma la loro fruizione non è stata monitorata.

Perché l'azienda possa realmente appoggiarsi all'eLearning per la formazione e perché i dipendenti possano familiarizzarsi con questi strumenti, è bene valutare ogni azione che viene effettuata in questa direzione.

Come già accennato la rigida distinzione tra formazione in aula e formazione online può essere sostituita da formule *blended* che permettono l'arricchimento delle lezioni su computer con sessioni *live* e viceversa.

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Comunicare l'eLearning in una organizzazione

Il caso di Ernst & Young

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Luglio 2005

Introduzione

Obiettivi e struttura

Obiettivi

Questo documento intende:

- descrivere le attività formative e in eLearning di Ernst & Young Italia;
- analizzare l'esperienza formativa di un corso di inglese online offerto ai collaboratori di Ernst & Young Italia;
- presentazione dell'analisi dei risultati formativi e delle interviste a personale della formazione e ad apprendenti.

Struttura del documento

La prima parte del report offre una presentazione di Ernst & Young a livello globale e italiano; sono descritte le sue attività di formazione con particolare attenzione a quelle in eLearning. Nella seconda sezione è descritta in dettaglio l'esperienza formativa del corso d'inglese online distribuito da Englishtown.com. La terza sessione presenta l'analisi e la sintesi di alcuni dati raccolti, delle interviste e delle osservazioni dirette presso la sede di Milano in via Wittgens.

Knowledge base

Le informazioni su cui si basa questo documento sono:

- incontro con dott. Gianluigi Granieri – EY Chief Learning Officer Italy – in data 6 luglio 2005;
- intervista a Ilaria Bozzetti – L&D Assistant EY, Italy – in data 22 luglio 2005;
- dialogo con Gianluca Greco in data 22 luglio 2005;
- interviste telefoniche a 7 partecipanti del corso online;
- statistiche di tracking del LCMS;
- documenti di comunicazione interna;
- osservazione diretta presso l'ufficio dal 1 al 28 luglio 2005;
- visione del corso online e dell'ambiente formativo online.

Il presente rapporto è stato poi discusso e concordato con il professor Lorenzo Cantoni, direttore del NewMinE – New Media in Education – Lab.

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Il contesto

Raccolta del materiale e descrizione delle attività

Il contesto di studio

L'azienda: Ernst & Young (EY) è una società, nata nel 1906, operante a livello mondiale nel settore dei servizi professionali alle imprese; EY è tra i leader mondiali nei servizi di audit, transaction advisory services, consulenza fiscale e legale. La sua importanza nel contesto delle società di servizi professionali alle imprese è testimoniata dal fatto che EY opera, sul piano globale, con circa 100.000 dipendenti e un network di circa 670 uffici presenti in 140 paesi del mondo con un fatturato mondiale di 14,5 miliardi di dollari all'anno e posizionandosi al primo o al secondo posto in 7 dei 10 più importanti mercati del mondo. In Italia, l'offerta integrata di servizi professionali è diffusa su tutto il territorio con 16 uffici e circa 2.200 collaboratori, tra cui 187 partner, e un fatturato di circa 240 milioni di euro. Attraverso l'impiego di strumenti, metodologie e competenze globali e integrate, le linee di servizio di Ernst & Young assistono l'imprenditoria con i seguenti servizi:

- Assurance & Advisory Business Services – AABS (che comprende servizi di Audit – revisione contabile, e i servizi AABS specializzati, come Business Risk Services – BRS, Technology & Security Risk Services – TSRS e Litigation Advisory Services – LAS);
- Transaction Advisory Services (con i servizi di Business Plan Modelling, Corporate restructuring, Finanza agevolata, Merger & Acquisition, Project Finance, Real Estate, Transaction Support e valutazioni d'azienda);
- Business Advisory (il quale si esplica con i seguenti servizi – prodotti: Business & Innovation, Performance Measurement, Business School, Financial & Administration, Structural Funds, Organization & Competence, Environment, etc.);
- Fiscale (con la seguenti specializzazioni: Transaction Tax, Corporate Tax, Global Financial Services, Litigation, VAT & Indirect Tax, International Tax Services, Global Tax Operate, Servizi Societari Corporate Services, Transfer Pricing, etc.;
- Legale (Public Law, Real Estate, Labour, Banking & Finance, Intellectual Property & Information Technology, Litigation & Arbitration, Antitrust & Regulatory.

Tra i suoi clienti nel mercato italiano, figurano grandi nomi del settore industriale (Mondadori, CocaCola, Ikea, etc.), del settore bancario (Banca d'Italia, Gruppo Intesa, Capitalia, etc.) e del settore assicurativo (FonSai, Alleanza, RAS, etc.).

Il Learning

Lo scopo del Continental Western Europe Area (CWEA) Learning & Development, è quello di allineare le priorità e strategie di learning all'interno dell'area così da sviluppare un approccio più integrato e funzionale a:

- assicurare maggiore qualità e coerenza tra i contenuti erogati dalle diverse country;
- limitare "ridondanze" e duplicazione degli sforzi nelle varie country.

La formazione in EY è basata su due macro-competenze specifiche volte a consolidare una organizzazione globale basata sulle persone e sulla conoscenza e volte a promuovere le competenze tecniche delle risorse:

- *Organisational Wide*
    - Personal Excellence
        - Language Learning
    - Formazione continua Dottori Commercialisti
    - GFIS (Global Financial Information System)
    - Knowledge
    - Industry
    - Q&RM (Qualità and Risk Management)
    - Partner Learning and Development System
    - Technology
- *Technical*
    - AABS
    - Legal
    - TAS – BRAS
    - Corporate Finance
    - TAS Transaction Support
    - Tax

L'eLearning

EYLeADS (Ernst & Young Learning And Development System) è la piattaforma globale sviluppata da Intellinex per la formazione aziendale sia online (catalogo di WBL) che off-line (classroom). L'offerta è costituita da 589 corsi a livello globale sviluppati da Intellinex e da 3 realizzati *ad hoc* dal team italiano non solo nella parte dei contenuti (realizzati con il supporto dei professionisti interni) ma anche nella parte di sviluppo tecnico. Questi ultimi riguardano: "La sicurezza e la salute sul lavoro", "Welcome in EY Italia" e "La privacy e il trattamento dei dati personali". Accanto a questi corsi, sono state sviluppate come soluzioni online i cosiddetti TVA (Test di valutazione dell'apprendimento) erogati alla fine di ogni corso d'aula con durata superiore alle 8 ore, per un totale di 52 TVA. Tutti i test sono costituti da domande con risposta multipla o del tipo V/F e sono personalizzati sui contenuti specifici del corso tenuto in aula.

Il caso

Descrizione di un caso di eLearning

Il programma strategico per il language learning

La conoscenza della lingua Inglese rappresenta per EY un requisito necessario per l'assunzione e per i successivi passaggi di carriera. L'azienda si è sempre impegnata a sostenere (totalmente o in parte) gli investimenti necessari affinché tutto il suo personale possa sviluppare le competenze linguistiche necessarie. Ernst & Young prevede per tutto il personale l'accertamento dei livelli di *proficiency* (1. *baseline*, 2. *progressing*, 3. *proficient*, 4. *excellent* e 5. *mastery*) mediante l'utilizzo di uno dei più diffusi test per il *business english* (TOEIC), somministrato sia in sede di assunzione sia durante il rapporto di lavoro con frequenza biennale e/o in prossimità dei passaggi di carriera. Va precisato che ogni unità di business (AABS, TAS, TAX, CBS…), definisce quelli che sono gli standard minimi richiesti per i vari ruoli in una determinata area.
I percorsi formativi e le modalità di apprendimento più funzionali sono definiti sulla base di due parametri: 1. Livello professionale / ruolo ricoperto; 2. Livello di competenza linguistica posseduta (ed eventuale scostamento rispetto agli standard aziendali attesi). In base a tutto ciò il responsabile della formazione di E&Y e il suo staff definiscono le soluzioni formative (i cui corsi sono effettuati presso strutture accreditate e/o convenzionate) più indicate, aventi come obiettivo l'incremento della competenza linguistica sul: continuum sviluppo → consolidamento → mantenimento. È stato fondamentale per la definizione di una *language policy* la determinazione del miglior mix tra le varie metodologie formative, atto a costituire e delineare l'approccio *blended* adottato in E&Y. Intese in senso generale, le varie soluzioni formative contemplate nella language *policy* di EY sono:

- corsi on-line;
- lezioni di gruppo;
- lezioni individuali;
- full immersion residenziali (sia in Italia che all'estero):
    - individuale: 1 settimana;
    - individuale: 3 giorni (weekend);
    - di gruppo.

Il percorso formativo viene progettato sulla base di alcune caratteristiche proprie dell'organizzazione:

- eterogeneità della popolazione dipendente;
- dispersione geografica dei dipendenti;
- quantità di tempo speso dai propri dipendenti presso le imprese clienti;
- carichi di lavoro cui tali dipendenti devono ottemperare.

Englishtown – fase pilota

Il programma di inglese online che è stato scelto per la formazione linguistica si chiama *Englishtown*. La sperimentazione ha avuto inizio a giugno 2003. È stata svolta una fase pilota di tre mesi con 60 persone scelte a caso tra le varie *service lines* tenendo conto di due criteri quali il livello di inglese e il ruolo professionale e privilegiando le categorie più basse[1]. Il reparto L&D in linea generale si è ritenuto soddisfatto dei risultati ottenuti durante la sperimentazione. Gli apprendenti hanno partecipato e testato tutti i livelli disponibili (dal *pre-beginner* al *post-intermediate*) e sono stati supportati costantemente dal tutoring online. Al termine di questa fase è stato inviato un questionario da cui è stato possibile trarre alcune considerazioni. I partecipanti hanno apprezzato la flessibilità del sistema, la semplice e gradevole fruizione dei corsi e la regolarità delle attività di studio dettate dal sistema. Si sono, invece, lamentati del poco tempo che avevano a disposizione per fruire del corso dato che è stato proposto in un periodo di carico di lavoro. Per questo motivo sono state fatte alcune richieste quali che ci fosse più tempo a disposizione per recuperare gli eventuali periodi densi di impegni professionali, che fossero creati degli spazi dedicati nella struttura aziendale (*learning point*) e che vi sia un maggiore coinvolgimento dell'azienda nel progetto.

Englishtown – prima edizione

Considerando i soddisfacenti risultati della sperimentazione, ad aprile 2005 è stata avviata la prima edizione del corso. Sono state acquistate 100 licenze per un anno di cui, ad oggi (18 luglio 2005), ne sono state distribuite 63. Le risorse sono state coinvolte su richiesta dei responsabili o per scelta volontaria. Il programma prevede quattro ore d'impegno settimanali. Sono state create due figure di supporto. Il tutor di Ernst & Young con una funzione di sollecitatore e motivatore e il tutor di *Englishtown* cui i partecipanti possono rivolgersi per domande di contenuto. L'invito al corso è avvenuto in tre passaggi:

- mail di invito: i partecipanti ricevono una email introduttiva in cui si annuncia il loro coinvolgimento in questa iniziativa di formazione linguistica, in cui si indica e si descrive il corso *Englishtown*, si fornisce un link per avere ulteriori informazioni e si specifica la flessibilità di fruizione del percorso formativo nell'arco dei 12 mesi futuri.
- distribuzione del kit con comunicazione: il kit è composto da delle cuffie da un blocco per gli appunti e da una lettera di "informazioni utili". È segnalato il link a cui bisogna collegarsi, la durata della licenza, il tempo massimo per l'attivazione dei codici, l'impegno richiesto, i tempi di accesso e i riferimento per contattare i due tutor.
- mail per l'accesso: con l'ultima comunicazione si conferma l'attivazione del corso e si forniscono *login* e *password* per

[1] Servizi interni, personale di servizio, staff e acting senior.

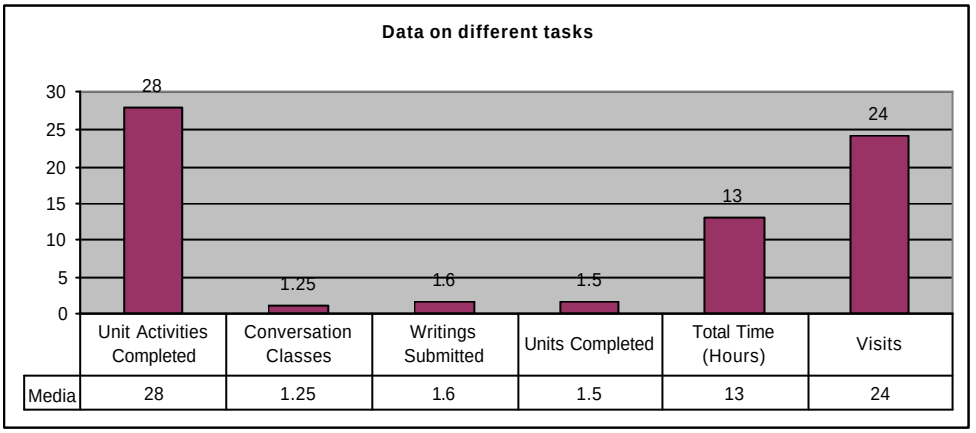
registrarsi. Vi sono anche alcuni consigli su come costruire il proprio “study plan”, fissare l’obiettivo di avanzare di un livello lavorando 3/4 ore a settimana e vi sono alcune specifiche tecniche in caso incontrassero problemi di questa natura.

Analisi dei dati

Risultati della raccolta dati

Test e monitoraggio

Ci sono stati forniti i dati tracciati dal LCMS gestito da Intellinex e riportiamo alcuni risultati sulle attività che in media hanno svolto le 63 persone iscritte durante i primi 3 mesi di corso.



Bisogna notare che la varianza dei dati è molto elevata e che quindi è stato deciso di approfondirli con alcune interviste *ad hoc* ad alcuni partecipanti che si sono distinti nel gruppo.

Interviste

Sono stati contattati telefonicamente 7 partecipanti e sono state poste loro 5 domande specifiche.

1. *Meaning*: Come giudica l'esperienza che ha avuto? Ritiene che gli obiettivi fossero chiari?

2. *Learning & Information*: Le sono state comunicate tutte le informazioni di cui aveva bisogno?

3. *Organisational enviroment*: Ritiene di essere stato supportato dall'azienda?

4. *Policies*: Era cosciente dell'impatto dei risultati formativi sull'avanzamento di carriera?

5. Osservazioni generali o difficoltà incontrate?

Di seguito sono riportate alcune risposte rilevanti:

1a	a. Esperienza positiva. La mia competenza linguistica è migliorata. b. Il corso è fatto bene ma lo seguo da casa al sabato. c. Bello, soprattutto rispetto ad alcune esperienza avute in passato con dei CD-Rom. d. È la prima volta che frequento un corso online e ne ho apprezzato la versatilità. e. Molto positiva ma manca il tempo, l'ho frequentato durante le vacanze estive.
1b	a. L'obiettivo è quello aziendale e non interno al corso. b. Lo faccio per esercitarmi non ho obiettivi precisi. c. Vorrei passare di un livello nel prossimo test TOEIC. d. Farlo il più possibile durante la pausa pranzo.
2	a. Le indicazioni erano molto chiare ed era tutto spiegato nelle email che abbiamo ricevuto. b. Sì in abbondanza. c. L'eLearning ormai è diffuso, sapevo cosa aspettarmi.
3	a. Non ho incontrato problemi. b. Non mi sono informata sulla possibilità di essere supportata. c. Non ci hanno lasciato il tempo necessario ma quando ho avuto delle difficoltà mi hanno risposto immediatamente. d. Sì ma collegarsi dal lavoro è impossibile.
4	a. Non esplicitamente. b. No, non viene specificato. c. No per nulla. d. Ci sono degli obiettivi aziendali relativi all'inglese; il bonus si basa sul loro raggiungimento. e. È obbligatorio e deve essere portato a termine.
5a	a. Mi piace imparare una lingua ma farlo al sabato risulta

	difficile. b. Sono una persona che studia in modo regolare, ma le conversazioni mi imbarazzano; sembra di parlare nel vuoto. c. Ho convinto alcuni colleghi a frequentare il corso.
5b	a. Ho trovato utili le classi di conversazione online. b. L'ho sempre fatto durante il week-end. c. Quattro ore sono molto impegnative per il week-end; ho ridotto a due ore ma l'ho deciso da sola. d. Preferirei l'aula. e. Vorrei più tempo ma non cambierei per l'aula.

Osservazioni

Meaning

Il *Meaning* o meglio il significato delle attività proposte in una organizzazione e il loro obiettivo contribuiscono ad accrescere la motivazione dei partecipanti.

Per il corso preso in esame era assolutamente chiaro lo scopo e l'utilità di imparare l'inglese con un corso onlline ma non erano stati esplicitati degli obiettivi chiari.
La creazione di obiettivi personali e raggiungibili aiuta gli apprendenti ad organizzare il tempo e a continuare il corso.

Learning & Information

La fase di preparazione - *Learning & Information* - che precede l'inizio del percorso formativo è rilevante per l'acquisizione delle competenze tecniche e cognitive. Spesso gli apprendenti cominciano una esperienza in eLearning senza essere coscienti delle differenze, dei limiti e dei vantaggi della formazione online rispetto a quella in aula. Allo stesso modo, la famigliarità con gli strumenti informatici e la possibilità di accedere ai contenuti, mettono lo studente nella condizione migliore per sfruttare l'esperienza formativa.

La comunicazione di questa esperienza è stata progettata e realizzata in modo accurato. Ciò nonostante essa risulta un pò fredda e differente dalla modalità di "invito" che si utilizza con i corsi in aula. Tutti gli apprendenti hanno dimostrato di conoscere bene lo strumento informatico e di avere dimestichezza con l'eLearning.

Organisational enviroment

Il contesto organizzativo in generale - *Organisational enviroment* - può influire sul successo di una esperienza formativa in eLearning. Alcuni fattori come la promozione interna, il coinvolgimento del management e il supporto durante la fruizione sono elementi che incidono sulla motivazione dei partecipanti.
I partecipanti hanno dichiarato di essere stati supportati ogni volta che ne hanno avuto bisogno. Bisogna notare però che *management* o *top-management* non sono stati coinvolti in nessun modo.

Policies

Le norme interne - *Policies* - riguardanti i sistemi di incentivazione o che regolamentano lo svolgersi delle attività formative (es. spazi e tempi), sono tenute in grande considerazione dai partecipanti e guidano la loro esperienza.

Gli apprendenti non sono stati informati sulle “conseguenze” della loro frequenza online e non avevano quindi nessuno punto di riferimento per regolarsi.

Dato che la conoscenza della lingua inglese è inserita tra gli obiettivi aziendali, i partecipanti si sono basati su questa indicazione ma non hanno considerato il corso direttamente collegato a questi obiettivi.

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Comunicare l'eLearning in una organizzazione

Il caso di Banca Intesa

dr. Chiara Succi

Dicembre 2003

Introduzione

Obiettivi e struttura

Obiettivi

Questo documento intende:

- presentare l'utilizzo delle nuove tecnologie della formazione in Banca Intesa;
- descrivere il progetto di formazione Migration Comit;
- sottolineare gli elementi distintivi del progetto.

Struttura del documento

Nella prima parte del report s'introduce il contesto di applicazione del progetto Migration Comit e si descrivono le fasi salienti del processo di formazione; ci si concentra, poi, sull'utilizzo dell'eLearning, analizzando alcuni dati di riferimento quali la fruizione dei partecipanti e i risultati di apprendimento. Infine saranno presentate alcune considerazioni, mostrando criticità e punti di forza dell'esperienza formativa.

Il contesto

La Banca, la migration e l'eLearning

Knowledge base

Le informazioni su cui si basa questo documento sono:

- Esperienza di stage presso Intesa Formazione da settembre a dicembre 2001 in fase di avvio del progetto Migration Cariplo;
- intervista alla dr. Nicoletta Scolari addetta alle risorse umane e responsabile dei tutor di procedura all'interno del progetto "Migration Comit";
- intervista al dott. Michelangelo Avallone, responsabile delll'ufficio metodologie e tecnologie formative;
- visione del corso online "Lo sportello";
- risultati del monitoraggio del corso;
- documenti interni di presentazione del progetto.

Il presente rapporto è stato poi discusso e concordato con il professor Lorenzo Cantoni, direttore del NewMinE – New Media in Education – Lab.

Privacy issue

Le informazioni contenute nei documenti messi a disposizione sono state trattate con la massima riservatezza e usate esclusivamente per la redazione del presente documento.

Il contesto di studio

La banca: Banca Intesa è il gruppo bancario italiano più grosso e uno dei più importanti sul mercato finanziario europeo. Nasce nel 1998 dall'integrazione di Cariplo e Ambroveneto. Nel 1999 Banca Commerciale italiana (Comit) entra a far parte del Gruppo Intesa (maggio 2001) e il gruppo assume la denominazione di IntesaBci che il 17 dicembre 2002 l'Assemblea modificherà nell'attuale Banca Intesa. Il gruppo conta circa 71.500 dipendenti con un numero di sportelli bancari in Italia e all'estero pari a circa 4.350.

Intesa Formazione: ha come scopo la promozione, la progettazione, l'organizzazione e l'erogazione d'iniziative di formazione. La società svolge attività di ricerca e di studio collaborando alla realizzazione d'attività formative sia in ambito nazionale che internazionale. Le diverse aree in cui si articola l'attività d'Intesa Formazione sono: la formazione su misura; la formazione finanziabile tramite fondi pubblici/privati; la formazione a distanza e l'eLearning.

L'eLearning: l'ufficio tecnologie e metodologie formative, con sede a Vicenza, ha sviluppato in collaborazione con Getronics la piattaforma Intesa Campus che gestisce una parte delle attività di formazione del gruppo integrando le attività che si svolgono in presenza con quelle supportate dalle nuove tecnologie. L'eLearning rappresenta una delle modalità di erogazione di formazione di cui l'azienda si può avvalere per fare fronte ad un bisogno formativo. In particolare questa modalità, ci hanno spiegato i collaboratori, è privilegiata nel momento in cui si verificano le seguenti condizioni:

- se il target di un corso è particolarmente ampio;
- se l'arco di tempo in cui erogarlo è limitato;
- se i contenuti garantiscono un certo livello di stabilità nel tempo;
- se l'investimento economico può essere, in generale, ammortizzato.

Nel corso del 2003 sono state erogate 40.035 ore in modalità eLearning.

Qualche accenno di storia

La storia delle tre banche del gruppo è estremamente eterogenea e mentre BAV in passato aveva già affrontato alcune fusioni, le altre due istituzioni si presentavano al momento della migrazione con una struttura piuttosto verticalizzata e non abituata a gestire grandi cambiamenti. Per quanto concerne la formazione e l'alfabetizzazione tecnologica, BAV aveva già sperimentato qualche strumento di formazione a distanza.

La prima migrazione di Cariplo ha presentato numerosi problemi che descriviamo sinteticamente per comprendere al meglio la successiva migrazione di Comit su cui si concentra la nostra attenzione.

La fusione di una banca comporta che tutte le procedure e i sistemi operativi siano "migrati" in quelli della casa madre; la migration di Cariplo ha avuto luogo ad Aprile 2001 ed è avvenuta con una modalità detta a b*ig bang*, ovvero era stato previsto che nello stesso momento tutte le filiali e circa 10.000 dipendenti cambiassero sistema operativo e procedure.

Questo processo ha richiesto enormi sforzi all'organizzazione, alle risorse umane, a ISS (Intesa Sistemi e Servizi) e ha causato grossi problemi nella fase di formazione.

La formazione era partita sei mesi prima del *roll-out* quando le procedure utilizzabili erano ancora precarie e comunque non testabili; la maggior parte della formazione era stata delegata al web senza

una fase di preparazione adeguata. Un ulteriore problema fu la parziale sovrapposizione con la formazione per preparare all'avvento dell'euro.

La Migration Comit

La popolazione Comit si presentava al momento della migrazione con un'età media dei dipendenti abbastanza elevata e per alcune categorie con una completa mancanza di alfabetizzazione tecnologica. La struttura era fortemente verticalizzata e la cultura aziendale era condizionata da una rigida gerarchia risentendo di gravi problemi di comunicazione interna.

Il cambiamento che la formazione quindi doveva supportare era sicuramente di tipo operativo e procedurale ma anche organizzativo e culturale. Partendo dall'esperienza della migrazione Cariplo molte cose sono state modificate e in particolare si è scelto un modello organizzativo diverso.

Organizzazione e strumenti formativi

È stato deciso di evitare la formula big bang e sono stati creati 5 lotti corrispondenti ad aree geografiche (nord-ovest, centro, nord-est, lombardia e sud) che sono partiti a distanza di due mesi l'uno dall'altro tra aprile e ottobre 2003. La formazione ha accompagnato questo processo anticipandolo a sua volta di due mesi. Si é deciso di non realizzare più la formazione solo via web ma è stata adottata una via mista (blended).

Per l'area commerciale sono stati approntati dei corsi in aula e per il settore amministrativo è stato progettato un corso online di circa 5 ore chiamato "Lo sportello" rivolto a tutti i dipendenti; tra questi i responsabili operativi (quasi uno per ogni filiale) erano formati in aula o effettuavano degli stage di affiancamento presso una delle filiali del gruppo per ottenere un effetto "demoltiplicatore". Al corso online è stato affiancato un tutoraggio telefonico per garantire alle persone, con più difficoltà con le tecnologie web, di poter esprimere le loro incertezze. Questo ha permesso di superare le difficoltà culturali legate al vecchio e insufficiente apparato comunicativo.

Un altro strumento formativo adottato sono state le task force; consistevano in un gruppo di specialisti commerciali e amministrativi, più o meno grandi a seconda delle filiali, che affiancavano gli operatori Comit una settimana prima della migrazione e restavano sul posto fino a tre settimane dopo.

Per quanto concerneva gli aspetti più tecnici i dipendenti, una volta introdotte le nuove procedure, potevano avvalersi di un servizio di help desk che contava circa 300 assistenti.

Personale e comunicazione

Per ogni area sono stati creati un referente organizzativo e uno delle risorse umane; tra questi uno era anche designato come referente della formazione.

I referenti sono stati riuniti durante una giornata a Milano per essere istruiti sulle varie fasi del progetto di formazione. Inizialmente queste figure non sono state coinvolte adeguatamente, ma in un secondo momento hanno iniziato a partecipare attivamente ed hanno aiutato molto a personalizzare i percorsi formativi dei rispettivi lotti.

La loro conoscenza della cultura aziendale dei vari reparti della banca (differenze nord-sud) è stata una grande risorsa all'interno del progetto di migrazione. Allo stesso modo è stato fondamentale l'apporto del reparto delle risorse umane che conoscevano bene la popolazione Comit e che già avevano seguito altri processi di fusione.

Sono state realizzate anche delle giornate di formazione di due o tre ore per i vari direttori di filiale e per i responsabili operativi. A questi era lasciato il compito di informare i partecipanti al corso, anche se ciò non è avvenuto sistematicamente.

Un'altra figura centrale è stata quella dei tutor telefonici pensati come interfacce intelligenti tra il reparto di formazione e i dipendenti; quella che inizialmente era una figura destinata a rispondere a delle domande banali si è presto trasformata in un "sensore" per le HR che permetteva di capire il clima aziendale, individuare i problemi e modulare gli interventi alla popolazione. In certe aeree, come al sud, dove si manifestavano i problemi di comunicazione più grandi i tutor invitavano personalmente ogni dipendente a frequentare il corso.

Il corso online "Lo sportello"

Il nord-ovest è il primo lotto che è stato migrato ed è anche quello che ha mostrato più criticità poiché si trattava di un'area fortemente sindacalizzata e con molti problemi interni.

Inoltre contemporaneamente a questa prima fase, si è presentato il problema degli esuberi[1] che ha portato numerose modifiche alla pianificazione delle attività.

Era previsto che il corso fosse fruito in 5 ore, lasciandolo a disposizione del personale per tre settimane; in seguito si è verificato che il corso mediamente veniva terminato in due o tre ore e che quindi le tre settimane erano eccessive. Infatti, ogni settimana partiva

[1] L'anno scorso Banca Intesa ha dovuto affrontare un grosso taglio del personale che ha coinvolto in particolare le regioni settentrionali; questo ha provocato il licenziamento, il trasferimento e il cambiamento di ruolo di molti dipendenti. Avvenimenti di questo tipo complicano enormemente la pianificazione dei percorsi formativi che devono essere continuamente rivisti.

una nuova edizione di circa 100/300 persone e questo comportava ingenti costi per le infrastrutture tecnologiche.

In un primo momento erano stati previsti 20 tutor per rispondere alle domande sui contenuti del corso; in seguito sono stati ridotti a 5 anche perché i contenuti erano giudicati ben fatti, semplici e gradevoli e suscitavano poche domande. Inoltre, come già accennato, si è compreso che i tutor dovevano assumere un altro ruolo, fondamentale ma più circoscritto e che richiedeva qualità diverse.

La prima comunicazione ufficiale che è stata spedita a tutti i dipendenti era la spiegazione delle modalità di accesso al corso con i rispettivi login e password. Questa operazione ha riscontrato i problemi più grossi quali la scarsa familiarità con la posta elettronica e il sistema di windows, che sono stati individuati e affrontati insieme ai tutor.

Come anticipato, il gradimento del corso è stato elevato e la percentuale di fruizione è stata del 70-80%. I contenuti sono stati giudicati in maniera positiva e sono state gradite anche le parti di simulazione e di esercitazione. Un limite del corso è stato che il materiale didattico verteva in particolare sulle procedure del front–office[2] mentre era stato pianificato per tutta l'area amministrativa; più volte è stato chiesto ai tutor perché non fosse stato pensato anche un corso mirato per il back-office da cui era stato giudicato lacunoso e in parte inutile.

[2] L'area amministrativa di Banca Intesa si divide in front-office (che è a contatto con i clienti) e back-office.

Analisi dei dati

Risultati della raccolta dati

Test e monitoraggio

Le persone del settore amministrativo per le quali era prevista la frequenza obbligatoria del corso erano 3590 persone. Nella tabella 1 possiamo osservare la percentuale di fruizione del corso suddivisa per lotto. In generale osserviamo che il WBT è stato fruito dall'83% (2.980) dei dipendenti previsti.

Tabella 1: Dati di fruizione del corso suddivisi nei lotti

Lotto	Iscritti	Terminato da	% di fruizione
1	550	349	63
2	858	707	82
3	609	536	88
4	795	688	87
5	778	700	90
Totale/Media	3.590	2.980	83

Si può anche costatare una crescita nella percentuale di fruizione dei lotti; è possibile dedurre che *in itinere* sia stata ottimizzata la strategia di comunicazione e di persuasione alla frequenza del corso. Altre 1544 risorse (tra obbligatori e non) hanno frequentato il corso "Lo Sportello" al di fuori della pianificazione programmata.

È stato realizzato un test per verificare l'apprendimento dei corsisti; questo è stato inserito nella Intranet aziendale ed è stato svolto dal 62% degli apprendenti (2829 su 4524 che in totale hanno frequentato il corso). Al termine del test si otteneva un punteggio che si distribuiva su una scala da 1 a 100 e di seguito presentiamo gli esiti dell'apprendimento.

Tabella 2: Suddivisione in classi dei punteggi del test

Punteggio	N°	Percentuale
da 0 a 25	1	0%
da 26 a 50	3	0%
da 51 a 75	127	4%
da 76 a 100	2698	96%
Punteggio medio: 86.8	2829	100%

I dati riportati nella tabella 2 invitano a fare due considerazioni. Innanzitutto mostrano che sono stati conseguiti gli obiettivi didattici dal momento che il test è stato realizzato dal reparto della formazione ma anche che questo tipo di classificazione è poco significativa a causa della scarsa distribuzione dei risultati.

Osservazioni

Comunicazione e integrazione di un progetto

Una lezione dal passato

La migrazione Comit deve in gran parte la sua riuscita all'esperienza acquisita durante la difficile *migration* che l'ha preceduta. La suddivisione in lotti e l'armonizzazione del lavoro dei diversi reparti dell'azienda sono il frutto di un'attenta ri-definizione del modello organizzativo.

In un ente di grandi dimensioni come Banca Intesa è importante che in fase di cambiamento sia promossa la collaborazione tra le varie parti. Durante questo processo di fusione la formazione doveva essere "capita" e supportata da ISS (Intesa Sistemi e Servizi) che si è occupata di mantenere contemporaneamente i due sistemi operativi per favorire il passaggio e dalle risorse umane che hanno contribuito a personalizzare gli interventi sulla popolazione grazie alla loro conoscenza del personale. Inoltre inconvenienti come la sovrapposizione di programmi formativi, il problema di esuberi e la scarsa flessibilità gestionale sono elementi da tenere in considerazione per una corretta valutazione di un programma di formazione.

Una lezione per il futuro

In sede conclusiva tentiamo di evidenziare gli elementi distintivi di questo progetto. Di seguito sono presentate sinteticamente le scelte formative e organizzative che, a nostro parere, si sono rivelate vincenti e quelle che invece hanno causato alcune difficoltà.

Aspetti positivi:

- inserimento di tutor capaci di verificare costantemente l'andamento del progetto;
- scelta delle tecnologie di comunicazione in funzione del pubblico di riferimento (telefono, mail o fax);
- formazione blended che ha affiancato al corso online stage e task force;
- coinvolgimento dei referenti dell'organizzazione e delle risorse umane che hanno permesso di modulare gli interventi sulla popolazione;

- strategia di comunicazione che ha previsto delle giornate di presentazione e una continua promozione del progetto presso i direttori di filiali e i responsabili operativi.

Aspetti negativi:

- mancanza di una fase pilota per verificare la pertinenza dei contenuti online e l'accettazione da parte dei dipendenti;

- tempi eccessivi per la fruizione del corso online rispetto alle esigenze dei dipendenti e per nulla funzionali al modello organizzativo;

- valutazione superficiale dei risultati di apprendimento e mancanza di feed-back da parte del reparto di formazione.

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NewMinE Lab

Comunicare l'eLearning in una organizzazione

Il caso di Isvor FIAT

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Settembre 2005

Introduzione

Obiettivi e struttura

Obiettivi

Questo documento intende:

- presentare il progetto di formazione realizzato per il lancio della Grande Punto;
- evidenziare peculiarità e criticità del percorso formativo;
- discutere i dati raccolti durante l'esperienza formativa.

Struttura del documento

Nella prima parte del report si descrive brevemente il profilo di Isvor FIAT e il contesto da cui nasce il progetto Grande Punto. Nella seconda sezione viene presentato il percorso formativo analizzando i supporti tecnologici e i prodotti distribuiti ai partecipanti. La terza parte si concentra sulle attività di tutoring, reporting e valutazione che hanno accompagnato il processo di formazione. Infine sono aggiunte alcune osservazioni sull'esperienza formativa, in cui vengono evidenziati punti di forza e criticità del progetto.

Il contesto

Il Gruppo FIAT e la raccolta del materiale

Knowledge base

Le informazioni su cui si basa questo documento sono:

- visite presso la sede di Isvor FIAT;
- colloqui e interviste all'intero staff del progetto;
- partecipazione alle attività di tutoring;
- partecipazione al percorso formativo;
- accesso alla reportistica;
- documenti interni.

Il presente rapporto è stato poi discusso e concordato con il professor Lorenzo Cantoni, direttore del NewMinE Lab – New Media in Education Lab.

Privacy issue

Le informazioni contenute nei documenti messi a disposizione sono state trattate con la massima riservatezza e usate esclusivamente per la redazione del presente documento.

Il contesto di studio

Isvor FIAT è la corporate university del Gruppo FIAT. Opera nel campo dei servizi di formazione, assistenza e consulenza. Isvor si occupa della formazione dei dipendenti FIAT, delle reti commerciali e dei centri assistenza. L'azienda nasce nel 1978 dall'integrazione delle strutture formative di FIAT già esistenti. Eredita un patrimonio di conoscenze ed esperienze che ha origine nel 1922 con la Scuola Allievi "Giovanni Agnelli", primo esempio in Europa di scuola d'impresa.
La missione di Isvor FIAT è di sostenere e diffondere le politiche e le strategie del Gruppo FIAT, di garantire l'apprendimento individuale e collettivo per lo sviluppo delle competenze delle sue risorse e per veicolare i valori distintivi del Gruppo.
Nell'ultimo anno Isvor ha vissuto una forte riorganizzazione interna in seguito alla quale si sono delineate 5 aree di gestione e due *practice* trasversali (*Planning & Execution Unit* e *Learning Processes & Tools*). In particolare la practice *Learning Processes & Tools* si occupa di sperimentare e sviluppare soluzioni innovative di formazione. Il principale strumento tecnologico utilizzato da Isvor per

la distribuzione delle attività in eLearning (es. WBT) per FIAT Auto e FIAT Veicoli Commerciali, è la piattaforma (www.fiattraining.it) sviluppata internamente e che attualmente è disponibile in 7 lingue. Dal 2001 la formazione dei venditori per il lancio o il *restyling* di un nuovo prodotto è sempre stata accompagnata anche da una parte online.

A maggio 2005 il gruppo FIAT ha deciso di anticipare il lancio della Grande Punto di un mese (previsto per ottobre 2005) ed ha chiesto a Isvor di formare tutti i venditori italiani.
Trattandosi di un lancio molto delicato e decisivo per l'intero gruppo FIAT, la formazione è stata investita di una grossa responsabilità. Isvor ha progettato la formazione di una popolazione di quasi 2.500 venditori in meno di tre mesi (con una parte di *delivery* di 5/6 settimane) in una modalità mai sperimentata prima: infatti per ragioni legate ai tempi e ai costi del progetto si è deciso di formare i venditori completamente a distanza.
Sulla base di un'esperienza analoga avuta nel 2004 (con 3.800 partecipanti di IAS effettivi) è stato progettato un processo formativo a distanza che fosse "irrobustito" da un servizio di tutoring e da un sistema di valutazione e incentivazione.
L'obiettivo prefissato da Isvor era quello di far completare il percorso formativo (test compresi) ad almeno l'80% della popolazione.
I partecipanti sono stati 2.526 fra venditori e responsabili commerciali delle concessionarie e organizzati[1].
La rete di vendita del gruppo FIAT è organizzata per a) aree, b) zone e c) concessionarie, anche questa iniziativa si è appoggiata sulla struttura esistente per sfruttarne le sinergie. Per esempio, i responsabili di zona (RZ) sono stati talvolta sollecitati da FIAT Auto a promuovere le iniziative formative e a presentare il sistema d'incentivazione.

[1] Gli "organizzati" sono una sottorete che stipula dei contratti con le concessionarie e non direttamente con la casa madre. È la prima volta che vengono coinvolti in un progetto formativo del gruppo FIAT.

Il progetto Grande Punto

Presentazione del processo formativo

La struttura e i tempi del percorso formativo

Il programma formativo è stato articolato in 5 unità didattiche di cui una introduttiva e quattro di contenuto. La durata complessiva del corso è di circa 5 ore, ma le unità sono state proposte in momenti diversi; la loro pubblicazione è avvenuta progressivamente ed è stata vincolata per garantire una fruizione sequenziale dei contenuti. Ciò significa che non era possibile accedere a un'unità didattica senza aver completato prima quella precedente (incluso il test a essa relativo). La distribuzione dei contenuti è avvenuta sfruttando diverse tecnologie e diverse modalità formative. I venditori, di volta in volta, potevano fruire dei moduli formativi o accedendo alla piattaforma – www.fiattraining.it – o utilizzando i prodotti multimediali e cartacei inviati loro via posta. Sono stati previsti diversi momenti di valutazione online intermedi e un test finale a carattere generale.

Le 5 unità didattiche

0. INTRODUZIONE: L'unità 0 ha l'obiettivo di illustrare il programma formativo e di far comprendere il funzionamento del percorso, nonché d'informare su modalità e scadenze. Sono presentati anche i primi contenuti sul lancio dell'auto: il segmento di riferimento, il confronto con la "vecchia" Punto, il *concept*, il target cliente e gli obiettivi commerciali generali.

1. IL PRODOTTO: La prima unità presenta la gamma dei modelli di Grande Punto con alcuni approfondimenti per livello di allestimento e insiste sul confronto con la Punto attuale.

2. LA CONCORRENZA: L'unità 2 identifica i punti di forza di ogni allestimento rispetto alla concorrenza di riferimento. Questo avviene mostrando i benefici e i dettagli qualificanti dei vari modelli e offrendo un "argomentario" di vendita rispetto ai principali concorrenti.

3. LA VENDITA: La terza unità mira a impostare la presentazione della vettura, identificare i target di vendita e articolare la strategia di

vendita per ognuno di essi. Sono approfondite le caratteristiche distintive dei vari modelli in relazione con il target di riferimento e in contrapposizione con la concorrenza.

4. IL PREZZO: L'ultimo modulo propone la struttura di prezzo dell'intera gamma e distingue i prezzi di ogni allestimento per ogni versione. È esplicitato il posizionamento sul mercato e viene offerto sia il listino prezzi della Grande Punto che quello delle auto della concorrenza evidenziando risparmi o investimenti rilevanti. Sono proposti anche alcuni strumenti finanziari e pacchetti comprensivi di assicurazione.

I prodotti e la comunicazione

Le attività formative sono caratterizzate da una grande varietà, data sia dai diversi supporti utilizzati, sia dalle diverse soluzioni formative e comunicative scelte.

I CD-ROM: il percorso formativo è partito con l'invio di un CD-Rom introduttivo (0). Sono poi stati inviati altri due CD-Rom, con l'unità (2) che presentava il confronto con le auto della concorrenza e parte del l'unità (3) sulle strategie di vendita. Questo supporto ha permesso di arricchire la presentazione delle informazioni con audio e alcuni video. I contenuti sono organizzati con una logica sequenziale che viene spezzata in alcuni punti da navigazioni trasversali. La consultazione è guidata durante la prima fruizione dopodiché i contenuti sono a disposizione del venditore e navigabili liberamente.

WBT: La piattaforma *fiattraining* è stata creata nel 2001 per erogare i prodotti formativi rivolti ai venditori di FIAT Auto. La piattaforma è disponibile in 7 lingue e segue i venditori di FIAT Auto e di FIAT Veicoli Commerciali nel lancio dei prodotti e anche nella fase post-vendita. Dal catalogo iniziale si può accedere ai vari corsi, oppure si possono consultare e comunicare le *faq*, essere informati sulle novità online o controllare l'avanzamento del percorso formativo personale.

Fig.1: Homepage della piattaforma *fiattraining*.

Per il lancio della Grande Punto sono stati pubblicati online un'unità completa (1), un'esercitazione (3), 4 test intermedi sui moduli di contenuto (1, 2, 3 e 4) e il test finale.
La piattaforma tiene traccia dei movimenti degli utenti e in questo modo (anche grazie alla presenza dei test) è stato possibile seguire l'andamento della formazione e, ove necessario, sollecitare i partecipanti a frequentare il corso. Sempre dalla piattaforma era possibile contattare i tutor per fare delle domande o chiedere assistenza.

I DOCUMENTI CARTACEI: il primo CD-Rom spedito alle concessionarie era accompagnato da una lettera di Enzo Gioachin (Direttore Commerciale FIAT – Italia) che introduceva il lancio dell'auto, presentava con uno schema il percorso formativo e accennava al sistema di valutazione dei partecipanti.
Al termine della parte online dell'unità 3 è stata data la possibilità di stampare alcune schede riassuntive di descrizione dei modelli e delle loro caratteristiche.
L'unità 4 è stata spedita alle concessionarie e consisteva in un manuale tascabile per la consultazione del listino prezzi e delle offerte finanziarie. Inoltre è stata spedita la "classica" guida prodotto che viene sempre fornita ai venditori come strumento di lavoro.
La comunicazione globale del prodotto formativo è stata progettata in dettaglio ma vi erano molti vincoli dati dall'esigenza di coerenza dei vari canali usati dal gruppo FIAT per il lancio del nuovo prodotto (es. Logo della Leo Burnett, embargo sulle immagini dell'auto ...).

Elementi distintivi

Supporto e valutazione dei partecipanti

Il tutoring

Per raggiungere l'obiettivo di coinvolgere l'80% della forza vendita italiana si è investito su di un notevole servizio di tutoring.
La popolazione di circa 2.500 venditori è stata divisa in classi (di circa 100 persone l'una) che sono state affidate a tutor. Ogni tutor poteva essere responsabile di una o due classi e sono state coinvolte quasi 20 persone. Nella sede di Isvor è stata allestita una *war-room* da dove i tutor potevano controllare i dati dei partecipanti, rispondere alle loro domande e contattarli telefonicamente o via email.

Fig.2: La *war - room* con le postazioni per i tutor e i monitor di aggiornamento sui dati di fruizione del percorso formativo.

Nella fase iniziale (dall'11 al 25 luglio) i tutor sono stati impiegati sull'"anagrafica", per assicurarsi che il database con i dati anagrafici e professionali dei venditori italiani fosse aggiornato e che tutti potessero essere raggiungibili.
Una volta avviato il processo formativo vero e proprio (18 luglio) il tutor era responsabile della sua classe e i suoi compiti erano:

- informare i partecipanti su come potevano contattarlo;
- rispondere alle domande;
- verificare il ricevimento dei materiali;
- assicurarsi che i contenuti online e multimediali fossero stati visionati e compresi;
- controllare che fossero stati effettuati tutti i test.

Al tutor era anche chiesto di monitorare le statistiche riguardanti i venditori della loro classe e di segnalare le persone con difficoltà nel superamento dei test ed eventuali dati anomali (es. fruizione dei contenuti in 30 secondi).

Chiaramente in alcune situazioni i tutor si sono basati sulla “buona fede” dei partecipanti che dichiaravano di aver ricevuto il CD-Rom e di averlo seguito ma più di una volta si sono dimostrati creativi nella verifica delle loro risposte facendo ad esempio alcune domande “a trabocchetto” scherzose sui contenuti del modulo.

Settimanalmente, i tutor compilavano una scheda di rilevazione generale, in cui si raccoglievano le domande più complesse, le criticità incontrate o i complimenti ricevuti.
Le schede riportavano problemi tecnici di varia natura che sono stati per lo più risolti (es.: caratteristiche delle varie postazioni, *Java virtual machine*), casi isolati di persone, soprattutto meno giovani, che si rifiutavano di seguire il corso a distanza, e alcune critiche sui contenuti e sul percorso in sé.
I complimenti sono stati fatti a molti tutor e i *feed-back* sul corso sono in generale stati positivi; in particolare, è stato molto apprezzato il *recall* telefonico svolto dai tutor.

Per facilitare la gestione della classe è stato creato un *tool* chiamato *Training Help* (TH) che sintetizzasse i dati per i tutor e che consentisse loro di annotare le verifiche effettuate telefonicamente o online. Le interazioni possibili tra il tutor ed i partecipanti erano di 3 tipi:

- telefonica (pianificata): tutor → studente
- telefonica (gestione delle eccezioni) tutor→ studente
- asincrona (compilazione della *form*) studente → tutor

Il tutor si faceva carico di rispondere entro 24 ore alle richieste delle sue classi:

- d‘informazioni sul percorso;
- d‘informazioni tecniche;
- di chiarimenti sui contenuti del corso (in questa attività i tutor erano supportati da esperti di riferimento sulle aree di: conoscenza prodotto, politiche commerciali, strategia di gamma, raggiungibili via email/telefono).

Infine le regole che il tutor doveva far osservare erano:

- terminare il modulo online delle unità 1 e 3 prima di accedere al test;
- compilare il test dell’unità precedente per accedere all’unità successiva;
- superare ciascun test con almeno il 75% di risposte corrette;
- avere al amssimo due tentativi per ciascun test;
- fruire di tutto il percorso e superare tutti i test d’apprendimento per accedere al sistema di incentivi (per ogni domanda riguardo ad esso, però, era necessario fare riferimento ai rispettivi RZ).

Il reporting

Il report di avanzamento del progetto generale era quotidiano e si basava su due strumenti: a) il tracking della piattaforma per tutto ciò

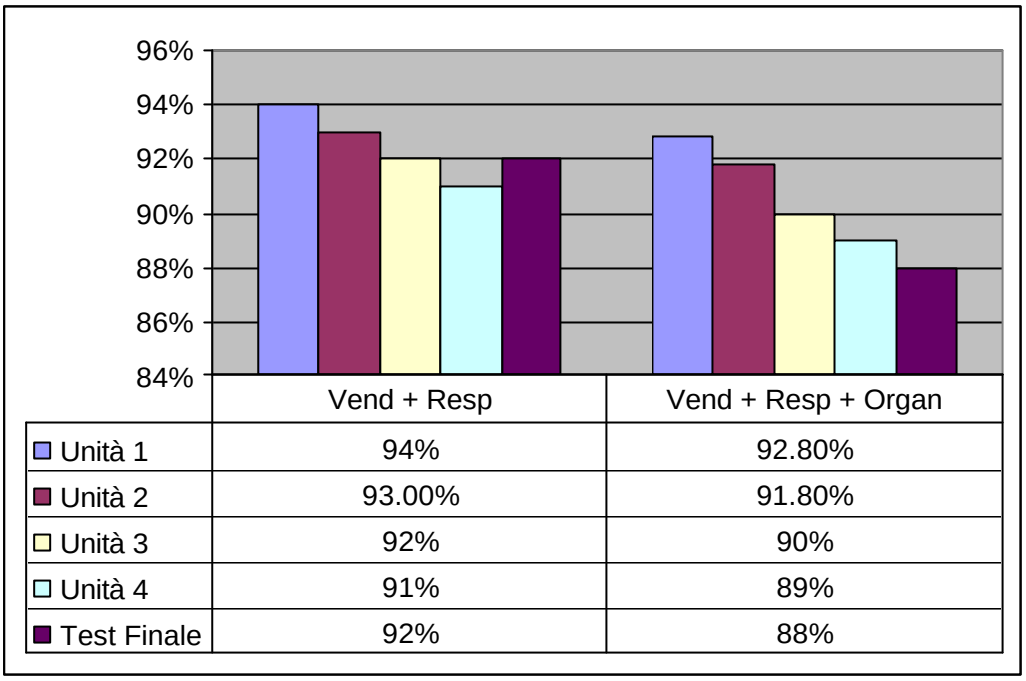
che concerne le statistiche riguardanti il WBT, i test e i risultati dei test; b) il *feed-back* dei tutor che aggiornavano i dati riguardanti l'anagrafica (c'è stata una variazione di una ventina di persone lungo il percorso) e la ricezione e fruizione dei CD-Rom. Il report dell'ultima unità si differenziava dagli altri per la descrizione dettagliata dei risultati del test finale.

I dati presentati nel report informano sulla fruizione di ogni singola unità, mostrando il numero assoluto di partecipanti (ass), la percentuale (%) e il differenziale rispetto al giorno precedente (colonna bianca). La popolazione è stata divisa in tre categorie: i venditori FIAT (riportati qui sotto), i Responsabili Commerciali e gli organizzati.

	DEALERS MI – Vend. FIAT			
	rilevaz. 9/09/05		rilevaz. 8/09/05	
	ass.	%	ass.	%
UNITA' 0 - CD				
VERIFICA TELEFONICA COMP. FRUIZIONE	**2028**	**97%**	2028	97%
UNITA' 1 - ON LINE				
ISCRIZIONI TOTALI *(A+B)*	**1888**	**90%**	1857	89%
UTENTI IN PROGRESS NEL CORSO (A)	**80**	**4%**	84	4%
UTENTI CHE HANNO COMPLETATO IL TEST (B)	**1808**	**87%**	1773	85%
HANNO SUPERATO IL TEST CON MAX CREDITI	**1772**	**98%**	1738	98%
UNITA' 2 - CD + TEST ON LINE				
ISCRIZIONI TOTALI *(A+B)*	**1756**	**84%**	1707	82%
UTENTI IN PROGRESS NEL CORSO (A)	**53**	**3%**	63	3%
UTENTI CHE HANNO COMPLETATO IL TEST (B)	**1703**	**82%**	1644	79%
HANNO SUPERATO IL TEST CON MAX CREDITI	**1550**	**91%**	1501	91%
UNITA' 3 - ON LINE				
ISCRIZIONI TOTALI *(A+B)*	**1484**	**71%**	1356	65%
UTENTI IN PROGRESS NEL CORSO (A)	**134**	**6%**	153	7%
UTENTI CHE HANNO COMPLETATO IL TEST (B)	**1350**	**65%**	1203	58%
HANNO SUPERATO IL TEST CON MAX CREDITI	**1290**	**96%**	1152	96%
UNITA' 4 - SCHEDE + TEST ON LINE				
ISCRIZIONI TOTALI *(A+B)*	**905**	**43%**	634	30%
UTENTI IN PROGRESS NEL CORSO (A)	**69**	**3%**	63	3%
UTENTI CHE HANNO COMPLETATO IL TEST (B)	**836**	**40%**	571	27%
HANNO SUPERATO IL TEST CON MAX CREDITI	**830**	**99%**	566	99%
ANAGRAFICHE REGISTRATE AL 12-09-05:	2088			
ANAGRAFICHE REGISTRATE AL 05-09-05:	2082			

Fig.3: Un esempio di report avanzamento del progetto per i venditori FIAT.

I risultati finali (fig. 4) comprendenti tutte le tre categorie della popolazione mostrano che è stato raggiunto l'obiettivo di raggiungere almeno l'80% della forza vendita italiana.



	Vend + Resp	Vend + Resp + Organ
Unità 1	94%	92.80%
Unità 2	93.00%	91.80%
Unità 3	92%	90%
Unità 4	91%	89%
Test Finale	92%	88%

Fig.4: Risultati finali sulla fruizione dei partecipanti.

La valutazione

Per verificare il livello di apprendimento dei contenuti trattati all'interno delle unità didattiche, è stato ideato un sistema di valutazione *ad hoc*.

TEST INTERMEDI: Sono stati creati 4 test intermedi composti da 8 domande a scelta multipla. Ogni domanda presentava quattro opzioni di cui una sola giusta. È stato previsto un *feed-back* (corretta/sbagliata) per ciascuna domanda, con l'indicazione dei contenuti da rivedere nel caso di risposta sbagliata.

TEST FINALE: Il test finale era composto da 12 domande selezionate casualmente da un *basket* di 38 domande. Anche in questo caso c'erano a disposizione 4 opzioni, la risposta esatta corrispondeva a due punti, i distrattori erano pesati, a seconda della loro gravità, 0, meno uno e meno due.

CREDITI: Ogni test aveva un peso differente sul risultato finale (1=3, 2=5, 3=9 e 4=3), i test intermedi equivalevano al 20% del totale e il test finale all'80%. Ciascun test si riteneva superato, e dava diritto ai crediti formativi, se si rispondeva correttamente ad almeno il 75% delle domande entro la prima o la seconda compilazione.

QUESTIONARIO DI GRADIMENTO: Al termine del percorso formativo è stato chiesto a tutti i partecipanti di compilare un questionario con l'obiettivo di valutare il livello di efficacia percepito dagli stessi, e individuare eventuali aree di miglioramento. Il questionario prevedeva 14 domande chiuse attinenti cinque macro aree:

- raggiungimento degli obiettivi dell'attività formativa;
- i contenuti del corso;
- le modalità adottate;
- gli aspetti tecnici/piattaforma e usabilità;
- giudizi di sintesi .

Infine una domanda aperta per la raccolta di suggerimenti e osservazioni.

I risultati

Il test finale è stato completato dall'86% della popolazione e di questi 226 (circa il 10%) non hanno superato il test. Il restante 90% ha superato il test ed ha conseguito un numero di crediti compreso tra un minimo di 40 e un massimo di 80 (fig. 5).

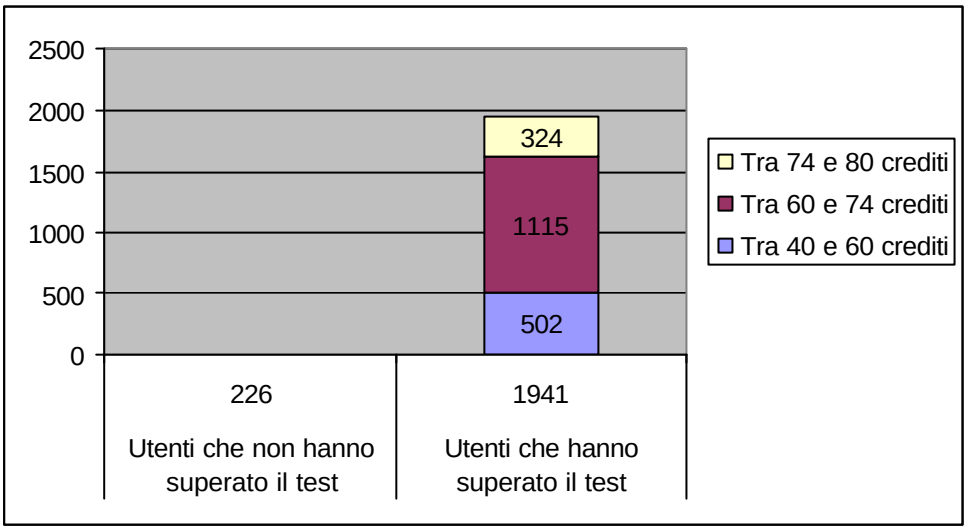


Fig.5: Risultati del test finale.

I risultati dei test sono stati registrati solo durante le prime due volte e i partecipanti che non sono riusciti a superarli sono stati contattati da un responsabile della formazione che ha cercato di capire le cause dell'insuccesso. Le cause d'insuccesso che hanno dichiarato sono:

- fretta;
- difficoltà di concentrazione;
- resistenza alla modalità formativa;
- difficoltà col meccanismo del percorso.

Per quanto concerne il questionario di gradimento invece la rete in generale si è dichiarata soddisfatta e ha giudicato il percorso formativo utile ed efficace.

Osservazioni

Fattori critici di successo

Da esperienze analoghe condotte in altre aziende in modalità *blended learning*, emerge che un progetto di formazione ha successo se si considerano quattro fattori critici: *Meaning*, *Learning & Information*, *Organisational enviroment*, e *Policies*. Di seguito sono presentate alcune osservazioni sul progetto Grande Punto in riferimento a questi.

Meaning

Il *Meaning* o meglio il significato delle attività proposte in un'organizzazione e il loro obiettivo contribuiscono ad accrescere la motivazione dei partecipanti.

In questo caso i venditori conoscevano sin dall'inizio l'importanza del lancio della nuova macchina ed erano impazienti di vederla e di venderla. Il percorso formativo è stato progettato *ad hoc* per questo lancio e differiva dal pacchetto formativo a cui i venditori si erano abituati negli ultimi tempi. Queste modifiche nella modalità formativa rispecchiavano anche il "clima" di cambiamento che sta investendo tutto il Gruppo FIAT: dalle strategie di vendita fino alla formazione.
Era quindi necessario esplicitare il più possibile il momento storico che il Gruppo sta attraversando ed essere coerenti con esso.
Questo è stato fatto esplicitamente con la lettera di presentazione del percorso e indirettamente (ma forse anche in modo più efficace) dai tutor che continuavano a chiamare le filiali e a sottolineare l'importanza della fruizione del corso.
Infine, vi sono alcuni piccoli aspetti che potevano forse essere curati maggiormente per allineare gli obiettivi del progetto con la forma di presentazione dei moduli e il loro contenuto (per es.: la voce dello speaker – uomo adulto sulla cinquantina poco brillante – sembra corrispondere al tipo di target che si indica ai venditori di superare).

Learning & Information

La fase di preparazione - *Learning & Information* - che precede l'inizio del percorso formativo è rilevante per l'acquisizione delle competenze tecniche e cognitive. Spesso gli apprendenti cominciano un'esperienza in eLearning senza essere coscienti delle differenze, dei limiti e dei vantaggi della formazione online rispetto a quella in aula. Allo stesso modo, la famigliarità con gli strumenti informatici e la possibilità di accedere ai contenuti, mettono l'apprendente nella condizione migliore per sfruttare l'esperienza formativa.

In FIAT l'eLearning è utilizzato da alcuni anni per il lancio di nuovi prodotti e i venditori hanno iniziato a conoscere pregi e limiti di questa

modalità formativa. La novità e la sfida di questo lancio è stata che tutta la formazione, e non solo una parte, è avvenuta in eLearning. Era importante essere consapevoli che si chiedeva un notevole impegno ai venditori dal momento che avrebbero iniziato a vendere l'auto senza averla mai provata in un *test-drive*, come erano soliti fare.
In situazioni come questa è necessario sottolineare che la formazione viene realizzata tutta in eLearning, dando consigli su come affrontare questa esperienza e chiarendo i motivi per cui si è compiuta questa scelta (tempi di mercato e costi).
Anche in questo caso una parte di lavoro rilevante è stata svolta dai tutor che accompagnavano gli apprendenti nel superare le difficoltà. Più di una volta è capitato che un tutor accompagnasse passo per passo un venditore che non era capace di accedere alla piattaforma o di far eseguire un CD-Rom.

Organisational enviroment

Il contesto organizzativo in generale - *Organisational enviroment* - può influire sul successo di un'esperienza formativa in eLearning. Alcuni fattori, come la promozione interna, il coinvolgimento del management e il supporto durante la fruizione, incidono sulla motivazione dei partecipanti.

Per il progetto Grande Punto insieme al CD-Rom di benvenuto è stata mandata una lettera firmata dal DC del Gruppo. Inoltre le telefonate e le mail dei tutor incentivavano il venditore a seguire il corso.
A questo proposito, come follow-up si potrebbe pensare all'organizzazione di un incontro sincrono con tutti i venditori (per es.: videoconferenza) con alcuni interventi dei principali dirigenti del Gruppo FIAT.

Policies

Le norme interne – *Policies* – che riguardano i sistemi d'incentivazione o che regolamentano lo svolgersi delle attività formative (per es.: spazi e tempi), sono tenute in grande considerazione dai partecipanti e guidano la loro esperienza.

I venditori delle concessionarie sapevano che se avessero finito le attività formative e avessero ottenuto dei buoni punteggi nei test online, sarebbero stati raccolti dei crediti e avrebbero avuto diritto ad alcuni incentivi da parte dell'azienda.
È bene comunicare chiaramente ai venditori il meccanismo d'incentivazione legato ai test online. La consapevolezza del premio potrebbe incoraggiarli a portare a termine qualora incontrassero una difficoltà e fossero tentati di abbandonare.